This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

LC
3733
S2J6

$B 17 843

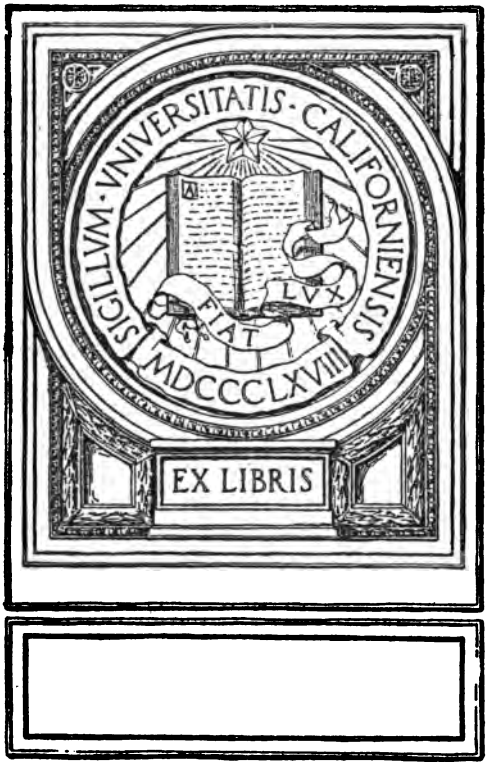
OOL AND HOME EDUCATION MONOGRAPHS

NUMBER FOUR

NATIONALITY AND SCHOOL PROGRESS

JORDAN

Digitized by Google



Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Digitized by Google

Nationality and School Progress
A Study in Americanization

By

RIVERDA HARDING JORDAN, Ph.D.

Professor of Education,
Dartmouth College

PUBLIC SCHOOL PUBLISHING COMPANY
Bloomington, Illinois

Digitized by Google

LC 31 .3
S2J

UNIV OF CALIFORNIA

COPYRIGHT, 1921 BY
PUBLIC SCHOOL PUBLISHING COMPANY
Bloomington, Illinois

Digitized by Google

PUBLISHER'S PREFACE

A careful study of the effect on the school progress of individuals and of school classes due to the presence of so large a percentage of children of other nationalities is an undoubted contribution to American pedagogical literature. As yet, the means are not at hand to carry such a study to completion. There are not yet available instruments for measuring school progress so well designed and standardized as to detect the exact effects of nationality. There are other factors from which the nationality factor can not be so separated as to determine the effect of each on school progress.

The most significant chapter of this study is Chapter Seven. In it are presented facts with regard to mobility of pupils, the occupation and economic status of parents, home conditions, church connections and other relations which affect school progress and also affect the conditions under which the pupils of different nationalities must do school work. American children should lead in school progress when, as shown in Table XXXIII, forty-seven percent of all fathers in the professions are Americans. Less than one third as many are Swedes, the nationality ranking second in this group. Add to this the evidence that the language difficulty of foreign-born pupils is very real and there ceases to be much significance in moderate differences in school progress in favor of American children.

School administrators will find much encouragement in the results of this study for their efforts to Americanize the children of all nationalities. They can make the schools a real "melting pot" for the immigrants without lowering the standard for mental ability or for capacity to become good citizens. Such is the evidence brought out in this study.

453110

Digitized by Google

Digitized by Google

CONTENTS

Chapter		Page
I.	Introductory Statement	1
II.	Scope and Field of the Inquiry	5
III.	Manner and Method of the Study	14
IV.	Nationality Factors Composing the School Population:	
	a. Birthplace of Parents	19
	b. Birthplace of Grandparents	19
	c. Birthplace of Children	22
	d. Language Persistence in the Home	26
V.	Nationality and School Progress:	
	1. Retardation	32
	2. Acceleration	38
	3. School Marks	41
VI.	Nationality and Objective Mental Tests	59
VII.	The Nationality Factor in Relation to Other Factors as Affecting School Progress:	
	a. Mobility of Students	76
	b. Occupation of Parents	81
	c. Economic Status of Parents	85
	d. Home Conditions, Church Attendance, etc	87
VIII.	Summary and Conclusions	94
IX.	Bibliography	104

Digitized by Google

Digitized by Google

CHAPTER I

INTRODUCTORY STATEMENT

The value of objective standards as aids to effective educational administration is continually becoming more evident and accordingly the acquisition of facts which may assist in the establishment of such standards is becoming more welcome. With the thought of making a slight contribution to this literature of administration, the following study has been undertaken.

In facing the enormous problem of assimilating and nationalizing the mighty influx of immigrants and their offspring, the American nation has, incidentally rather than intentionally, given over the task to the American public school. In carrying out this serious and stupendous obligation, the school has shown a wonderful courage and astonishing resourcefulness. And yet, effectual as have been the results when viewed in the large, the events of the past two years have brought home the fact that this incidental function of the school has lacked that complete fulfilment of purpose which results from carefully planned and scientifically developed effort. Clearly, the public school is the proper and most effective agency for keeping alive true national spirit in the native born, and for instilling it in the new arrival and his children, or, rather, through his children. But when the subject is taken up in a conscious and thorough-going manner, it is found to have many hitherto unsuspected phases and aspects. One fundamental need which appears immediately is that of a more careful study of the population itself, in its constituent elements. Too often, the attitude of administrators of education,

Digitized by Google

especially in our inland states, has been to assume the position that the onus should be shouldered by the receiving ports of debarkation, and by the teachers of the isolated settlements known as "Little Italies," "Little Russias," Germanies and the like, scattered here and there through the country. As to the rest of the country Americanization has not been a matter of definite study, or considered important enough for an application of the facts of population, even were they presented in scientific form. Yet the most careless perusal of the United States census reports must impress the fact that the element of our population, comprising 46.2% of the whole, and made up of foreign born whites, or native born whites of foreign born or mixed parentage, and of alien whites and dark skinned races of varied origin, is quite generally distributed throughout our land, with rather a marked predilection for city and town life. Surely the simple fact that nearly half of our population is made up of persons who are not native born, or children of native born parents, should set every superintendent to studying the composition of his own constituency, with respect to its national composition as well as its social and economic status. Without such knowledge, how can he hope to have his schools function properly in this great work of developing a national consciousness? With the stimulus that the war has given to the study of nationalities and, through their presence in our midst, to the responsibility which our nation may come to hold toward the countries of their origin, in the impending settlement of the affairs of Europe, it should be very easy for every school administrator to get at facts which will enable him to attack the problem of his community more intelligently.

We are not yet entirely clear just how far such an analysis of the school constituency should be carried, nor just what will be the problems of curriculum and variation of methods

Digitized by Google

ccasioned by the discovery of a mixture of nationalities in ny community. Our theory that the traditional elementary urriculum is admirably adapted to every child, of whatever rigin or capacity, would shut the door to any great variaion resulting from divergent blood strains in the district. his theory, of course, is constantly defended, as being horoughly democratic and insuring fair play to all. And, f it should develop, on studying critically the children of the olyglot group whom we are training, that all nationalities espond with equal facility and success to this scheme, then here is nothing more to be said. But teachers and superntendents are continually making sweeping generalizations egarding the various nationalities under their care, which vould seem to imply that there are marked differences in apacity and habits of application, as well as in traditions nd conventions, of such a nature as to require, in a thorughly efficient and scientific treatment of the situation, videly varying methods of treatment. When one hears uch persons speak carelessly, although as with authority, f the "bright Jewish children" as against the "stolid candinavians," of the "persevering Scots" as contrasted vith "those mercurial Irish," when they proclaim confidently the advantage of the pupil who speaks a foreign language n the home" as against the poor unfortunate whose parents' ole possession is English, even though pure and undefiled, t would seem that such assertions should either be conirmed, or a definite quietus be put to unreliable statements redicated upon prejudice, superficial observation, or narrow ange of experience. One great reason, of course, for such arelessness in expression is the almost complete absence of uthoritative evidence easily accessible to check the statenents.

In view of the situation as outlined, it has seemed essential o make a beginning toward a better understanding of the

Digitized by Google

varied constituency of our population by means of an impartial endeavor to determine whether essential differences can readily be detected, and if so, whether they are sufficiently marked to require modification in any respect of ordinary educational procedure. The investigation has thus taken a form which may perhaps be best designated a study of nationality in its relation to school progress.

The author wishes to express here his deep appreciation of the assistance rendered by the many persons who have made the study possible: to the principals and teachers of the schools studied in Minneapolis and St. Paul; to the graduate students of the College of Education of the University of Minnesota who assisted in the giving of the tests; to Dr. M. J. Van Wagenen, who supervised and checked the statistical work; to Prof. G. M. Whipple, of the University of Michigan, who read the manuscript and made many valuable suggestions; to the author's wife and mother, who assisted materially in collecting and arranging the data; and finally to Dr. L. D. Coffman, President of the University of Minnesota, who directed and inspired the entire study.

Digitized by Google

CHAPTER II

SCOPE AND FIELD OF THE INQUIRY

The investigation of nationality in its relation to school rogress is practically a virgin field. Mr. Leonard P. Ayres, ı his "Laggards in Our Schools" (1909), p. 106, says: . . . . so far as can be ascertained (no facts) at all have een cited to show what races succeed best in our schools nd which ones worst." And now, ten years later, but ittle more can be said. Mr. Ayres examined the records of ome 20,000 pupils in 15 New York City schools in which vas given the nationality of the fathers of the children, to ee whether the nationality of the father seemed to have any elation to the questions of retardation and acceleration, ınd decided that there were differences due to nationality. He gave it as his belief that "the question of how to handle a Scotch immigrant child is very different from that of how to treat an Italian. The education of an English boy is not at all the same task as the educating of a Russian" (p. 106). But he is unwilling to commit himself as to any opinion beyond the seeming evidence of the tendency quoted, saying that the current feeling that Southern European races are inferior to the Northern is by no means established, and closing the discussion with the first quoted statement.

Dr. J. K. Van Denburg, in his "Causes of Elimination of Students in the Public Secondary Schools of New York City" (1911) measured the actual effects of various possible causes of elimination in the cases of a thousand pupils taken at random from those who entered the public high schools of New York City in February, 1906. Among the factors determined in this study was the nationality of the pupil's father. Using this as a basis, Dr. Van Denburg found that

Digitized by Google

children of Irish parentage were eliminated first from high school, American next, German next, while Russians were most apt to remain in high school to complete the course.

Another type of study which has been made is that of Mr. R. D. Chadwick, principal of the Stowe grammar school of Duluth, Minnesota, in his own school, and published in the *Journal of Education* (Boston) Oct. 31st, 1918, under the title "Know Your School." Mr. Chadwick points out the problem facing administrators of schools containing a polyglot population by tabulating the different nationalities represented in his building, based on information given by 406 pupils regarding their parents. These children represent 25 pure and 36 mixed nationalities. There is no attempt made to show the relative standing in school work of these pupils, and, indeed, such an attempt would have been futile, from the fact that there were so few of each nationality represented in the school. Nor is there any indication that any adjustment should be made in the course of study or method of presentation of the work to meet the needs of any of these nationalities as contrasted with the others.

In the survey of the Cleveland Public Schools, made under the direction of Mr. L. P. Ayres, in 1915, some attention was paid to the nationality factor in the tests given in reading. In the volume of the Survey entitled "Measuring the Work of the Public Schools," by Dr. Charles H. Judd, (Vol. 10) in pp. 144–7, a report is made of tests given in oral reading in eight American schools, two Italian schools, three Hebrew schools, and seven Polish and Bohemian schools. However the report qualifies its findings thus: "The results shown can be accepted only in a very general way for two reasons. The first is that the number of schools involved in some cases is limited. The second is that it is not certain in all cases that the pupils tested from a school in which a given nationality dominated were of that type. The results

Digitized by Google

re, however, accurate enough to serve in suggesting explana-
ions of some of the earlier results reported for individual
chools." The results in each school are compared with the
verage scores in the Cleveland schools in general, in oral
eading, and show that the American schools are superior
n achievement during the first three grades and from that
oint on follow the average very closely. Italian pupils are
eriously handicapped. The children in the Hebrew schools
re distinctly ahead of the average Cleveland pupils. Poles
nd Bohemians make slow progress during the first year,
ollow the average closely for the next four, and then drop
elow the average during the last three years. But after all,
he very fact that is indicated in the report, namely, that
here are two outstanding reasons against drawing definite
onclusions from the results quoted leaves a well-defined
loubt as to the correctness of the conclusions, and makes
ut the more evident a need for a careful study of national
endencies, and especially of those where the pupils them-
elves are not under the handicap of foreign birth. Nor
an definite conclusions be drawn from grades made in a
ingle subject.

These studies quoted comprise the important contribu-
ions to the subject now available. Clearly, no one of them
nakes any serious attempt to examine into the individual's
ncestry, or tries to differentiate between the child of parents
epresenting only the first or second generation in this
ountry, and him whose grandparents were native born
Americans, and therefore truly American in origin.

There are, of course, varying concepts regarding the mean-
ng of the word "nationality." It is felt, however, that
here is no need to go into this subject further than to say
hat in this study nationality will be taken to mean a group
of people who speak essentially the same language, and who
therefore may be considered to derive their origin from the

Digitized by Google

geographical division in which that language is dominant. Accordingly, the present study has been undertaken with the idea of determining whether the factor of nationality of school children enters into their progress in school, in so far as this can be determined by a comparison of children of foreign-born ancestry, with those of distinctively American parentage.

In order to make such a comparison, a field for the investigation should be a community which has a population made up in about equal parts of Americans and of European nationalities. Such a combination affords a better basis for comparison in that the lack of either American or foreign predominance tends to equalize conditions of social development, since no one nationality dominates the others. The United States census reports of 1910 name eight cities of over 100,000 population in this country which are made up of nearly equal parts of the three classes of inhabitants listed in the nationality study of the census, namely, native whites of native parentage; native whites of foreign or mixed parentage; and foreign born whites. Such cities would seem to be the best fields for such comparisons as proposed, for on account of the nearly equal proportions of these three elements, there is no appreciable dominance of any one nationality, and so conditions are most favorable for uniform development of all. The cities are: Cambridge; Detroit; Minneapolis; Newark; New Haven; Providence; St. Paul; Worcester. Before deciding upon any one or more of these cities as a proper field of inquiry, a further examination should be made, to determine whether there is a sufficient distribution of nationalities to make a comparative study possible. The following table indicates the character of the population of St. Paul and of Minneapolis, as indicated by the Census Reports of 1910:

Digitized by Google

TABLE I

PERCENTAGE OF FOREIGN BORN INHABITANTS OF MINNEAPOLIS AND ST. PAUL, RELATED TO THE ENTIRE NUMBER OF FOREIGN BORN RESIDENTS OF THE TWO CITIES: (UNITED STATES CENSUS OF 1910)

	Minneapolis	St. Paul
Swedes	30.8	20.1
Germans	10.1	24.8
Norwegians	19.1	7.2
Canadians	8.7	7.7
Austrians	8.5	10.4
Russians	6.6	7.7
Irish	3.3	7.4
English	3.3	3.8
Danes	2.4	2.5
Finns	1.0	0.1
All Others	6.2	8.3
	100.0	100.0

The outstanding characteristic of this table is, of course, the predominance of northern European nationalities. However, a more detailed study of the composition of various wards and schools brings out a larger actual number of southern Europeans than this table would indicate. This will develop later in the study. Thus, in several schools there are, as a matter of fact, enough Italians, Roumanians, and Hungarians to make comparisons of some value.

The figures of actual population in each city are given in Tables II and III.

Digitized by Google

TABLE II

CONSTITUENCY OF FOREIGN BORN, AND OF NATIVE BORN WITH ONE OR BOTH PARENTS FOREIGN BORN, POPULATION OF MINNEAPOLIS. (CENSUS, 1910)
TOTAL CENSUS OF MINNEAPOLIS, 301,408

Nationality	Foreign Born		Native Born with:	
			Both parents F. B.	One parent F. B.
	Number	%	Number	Number
Austrian	6,075	7.1	3,958	530
Belgian	63	.1	25	45
Canada French	1,637	1.9	1,923	1,592
Canada Others	5,877	6.8	2,423	5,396
Danish	2,030	2.4	1,310	549
English	2,798	3.3	1,697	2,951
Finns	875	1.0	395	66
French	293	.3	301	300
Germans	8,650	10.1	14,798	6,544
Greeks	463	.5	36	19
Holland	209	.2	171	120
Hungary	1,176	1.4	506	75
Irish	2,867	3.3	7,180	3,548
Italian	653	.8	279	81
Montenegrins	118	.1	.....	.....
Norwegians	16,401	19.1	14,267	3,603
Roumanians	1,412	1.6	549	8
Russians	5,654	6.6	2,992	225
Scotch	1,060	1.2	740	919
Swedes	26,477	30.8	22,326	3,952
Swiss	299	.3	302	283
Turks	280	.3	81	7
Welsh	213	.2	296	252
All Others	358	.4	8,757	171
Total	85,938 28.5%	100.0	85,312 37.7%	31,236

Native whites, native parents, 31.9% of population.
Negroes, 0.9% of population.

Digitized by Google

TABLE III

CONSTITUENCY OF POPULATION OF ST. PAUL, SHOWING NUMBER OF FOREIGN BORN, AND OF NATIVE BORN WITH ONE OR BOTH PARENTS FOREIGN BORN (CENSUS OF 1910)

Nationality	Foreign Born		Native Born with:	
			Both Parents F. B.	One Parent F. B.
	Number	%	Number	Number
Austrian	3,900	6.9	3,405	904
Belgian	70	.1	21	32
Canada French	1,096	1.9	1,208	1,132
Canada Others	3,302	5.8	1,408	2,857
Danish	1,412	2.5	1,193	359
English	2,136	3.8	1,553	1,820
Finns	73	.1	14	15
French	276	.5	244	253
Germans	14,025	24.8	23,558	8,156
Greeks	129	.2	17	16
Holland	194	.3	158	76
Hungary	1,989	3.5	785	114
Irish	4,184	7.4	8,798	3,889
Italian	1,994	3.5	1,050	92
Montenegrins	.....	.....	.....	.....
Norwegians	4,063	7.2	4,001	1,230
Roumanians	267	.5	68	4
Russians	4,359	7.7	2,428	220
Scotch	669	1.2	528	535
Swedes	11,335	20.1	11,379	1,926
Swiss	544	1.0	473	309
Turks	202	.4	116	6
Welsh	73	.1	79	111
All Others	232	.4	6,747	111
Total	56,524 26.3%	100.0	69,231 43.5%	24,167

Total population of St. Paul, 1910, 214,744.
Native whites, native parents 28.7% of population.
Negroes 1.5% of population.

Digitized by Google

Tables II and III give an excellent statement of the actual number of foreign born and foreign derived inhabitants of the Twin Cities, and will be somewhat of an eye-opener to those persons who have imagined that the foreign population of these cities is almost wholly Scandinavian.

The distribution of these nationalities over the cities is the next item of interest, for a comparative study. In order to make well-founded comparisons, there should be a sufficient mixture of nationalities working side by side in the classroom to make comparisons possible on somewhat equal terms. The general situation in Minneapolis is indicated very clearly in Table IV.

TABLE IV

DISTRIBUTION OF FOREIGN BORN POPULATION OF MINNEAPOLIS BY WARDS. (CENSUS OF 1910)

NATIONALITY	WARD NUMBER												
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
Austria	2743	253	594	279	191	776	25	63	669	210	85	166	21
Canada French	304	89	260	146	68	39	40	77	413	99	17	51	34
Canada others	329	482	584	740	788	72	311	1000	455	303	117	206	490
Denmark	67	85	132	195	210	134	176	184	141	73	259	273	101
England	74	169	296	530	382	66	164	417	163	74	78	164	219
Finland	14	26	66	537	31	33	29	12	19	39	28	39	2
Germany	1226	341	1948	1029	552	237	268	494	754	813	285	441	262
Hungary	140	10	198	104	31	565	8	13	51	14	20	6	16
Ireland	296	127	384	460	287	146	221	267	221	88	131	152	87
Norway	316	630	1440	1130	1285	2037	1389	1106	1715	1155	2621	1154	423
Roumania	52	....	178	97	80	264	11	16	3	2	644	65	0
Russia	493	33	3115	818	208	260	22	66	277	130	207	13	12
Scotland	18	83	49	165	144	11	61	197	90	34	41	80	87
Sweden	627	1036	1992	1821	2100	2813	2521	1941	3201	2499	3119	1872	935

Digitized by Google

This Minneapolis table is decidedly illuminating, especially to persons who expect to find marked segregation of various nationalities in definite "quarters." Although there are evident certain gregarious tendencies, yet it will be noted that every nationality listed, with one exception, is represented in every ward of the city. It will be noted further that the smallest number of Swedes living in any one ward is 627; of Germans, 237; of Norwegians, 316; so that of these nationalities, at least, there will be sufficient contribution to the schools of any ward in the city to warrant a selection of schools by wards, without other guide, which would give scope for a very satisfactory comparative study. As a matter of fact, the investigator's knowledge of social and economic conditions of the city made it possible to use this basis as only a contributing element of his final choice.

The distribution for St. Paul is given on Page 1018, Vol. II of the United States Census of 1910, and shows a condition similar to that in Minneapolis.

From these facts of the census, it appears that the twin cities of Minneapolis and St. Paul afford a field broad enough for definite conclusions from a comparison of different nationalities with native American stock. The distribution of population among the various wards of these cities proves that it is possible to select public schools which draw from localities in which an adequate number of nationalities are represented for such a comparison.

The present investigation was accordingly limited to schools in the Twin Cities.

Digitized by Google

CHAPTER III

MANNER AND METHOD OF THE STUDY

In order to get at the facts of nationality and progress of school children, co-operation of the school authorities of Minneapolis and St. Paul was asked, and granted for those schools selected[1] as centers of investigation. The schools were, in Minneapolis, the Motley (2d ward), Grant (3d ward), Harrison (4th ward), Jackson and Clay (6th ward), Calhoun (8th ward), Prescott (9th ward), Holland (10th ward), Adams (11th ward), and Bryant (13th ward). In St. Paul, the Franklin, Sibley, and Van Buren. The records of the schools were put at the disposal of the investigator, and the

[1] The principal basis for selecting these schools was that of securing representation from districts of varied social constituency, and buildings of sufficient size to give enough pupils per grade and class for adequate comparisons within the school. The Motley School was first chosen to test the method employed in the study, from the fact of a varied constituency, drawn both from a prosperous industrial community and also from the University section, so that children of University professors and children of mechanics of foreign origin are enrolled in the same classes. The results of the study in this school encouraged further study, and the Calhoun and Bryant schools were selected from the best residence sections of the city, the Calhoun from the West High District, and the Bryant from the immediate neighborhood of the Central High School; the Prescott school in Northeast Minneapolis, the Harrison, in North Minneapolis, representing "middle class" districts of comfortable homes; the Adams in South Minneapolis, and the Holland in Northeast Minneapolis, generally thought of as being located in "foreign" districts of the better type; the Grant, on the edge of the "Ghetto" of North Minneapolis, and the Jackson and Clay schools, situated in a settlement district which draws principally from the slums of South Minneapolis and the "river flats."

In St. Paul, it was possible, on account of the "war conditions," to obtain access to schools through personal acquaintance only. As a result, it was impossible to make a selection based on definite plan, but in matter of fact, the schools used showed a very good "sampling" of nationalities, and proved to represent varied social groups.

Digitized by Google

principals of the various buildings gave their hearty co-operation. Even though the investigation was made during the school year 1917–18, when the schools were overloaded with outside activities and hampered with all sorts of interruptions, yet the investigation was welcomed heartily, both on account of the interest manifested in an inquiry of the sort, and on account of the fact that the investigator had just resigned from the Minneapolis school system, and so found himself working among friends and recent co-laborers. This fact of close co-operation made the results more accurate than would have been possible in working with strangers, for the personal interest of the principals and teachers resulted in a close scrutiny and correction of the questionnaires which were used. In order to get the facts of parentage from several thousand cases, a house to house canvass was manifestly impossible and as the facts needed were all purely objective, and easily answered through a question blank, it was felt that the inaccuracies of the usual questionnaire would be largely eliminated by an arrangement of check questions, and careful supervision.

Accordingly the following blank was prepared, and placed in the hands of the pupils:

PUPIL'S CARD

1. Name.....2. Age—Years.....Months.....3. Grade.....
4. Sex ..... 5. Race (White, Negro, Japanese) ..... 6. Do you wear glasses?.....7. Is your general health good?.....Fair?.....Poor?.....
8. Have you had a serious illness during the past year (serious enough so that you lost two weeks or more from school)?.....
.....
9. Father born in.....City or County....State....Country.....
10. Mother born in.....City or County....State....Country.....
11. Father's father born in.....City or County....State....Country.....
12. Father's mother born in.....City or County....State....Country.....
13. Mother's father born in.....City or County....State....Country.....
14. Mother's mother born in.....City or County....State....Country.....
.....

Digitized by Google

15. What language does your father speak at home?.....
16. What language does your mother speak at home?.....
17. What language, besides English, can you speak?.....
18. What language, besides English, can you understand?.....
19. How long has your father been in the United States?.....
20. How long has your mother been in the United States?.....
21. How many brothers have you?.....22. Sisters?.....23. Are you the oldest?.....
24. If you are not the oldest, are you the second, third, or where do you come?
.....
25. What places have you lived in besides Minneapolis?.....
.....
26. Is your father living?.....27. Your mother?.....
28. If your father is living, what is his occupation or business?.....
29. If your mother helps support the family, what is her occupation?.....
30. Do you work to earn money?.....31. What do you do?.....
32. What do you make per week?.....33. About how much did you earn last year?.....34. Do you help support the family?
.....35. Do you spend this money on yourself, save it, or give it to your parents?.....
36. Does your family own the home?....37. Rent?.....
38. What church does your father belong to (if any)?.....39. Mother?.....
40. What other schools in this city have you attended?.....
.....
41. In any other town or county?.....
42. What is your height?.....43. Weight?.....
44. Color of eyes?.....45. Hair?.....

It will be noted that the answers required are mostly of one word, that they are all matters of fact, and not of opinion and in general of a type to call for no great exercise of mental effort. The important questions 9–14 are checked by questions 15–18, by questions 19–20, and by questions 25 and 40. In the case of some religious beliefs, as the Jews, questions 38–39 also served as check questions. Questions 2–4, 8, 42–43 could be directly checked from the school records. Thus the principal objections to the questionnaire method are obviated by this system of checks, especially when it is remembered that the principals and teachers were

Digitized by Google

ready and willing to assist in giving further information in doubtful cases. But with all of these safe-guards, it was thought best to place the blanks in the hands of the pupils of the three highest grades only, namely the 6th, 7th, and 8th.[2] When it is understood that in nearly all cases the blanks were given to the children and were to be taken home, and filled out with the assistance of the parents, and in many cases accompanied by a mimeographed statement from the principal explaining the purpose of the questionnaire, further precautions will be seen to have been provided against error.

High School pupils were not included in the inquiry for the reason that the most universal distribution of nationalities was desired, so that by limiting the inquiry to those grades in which the compulsory[3] laws were most generally in force, this end was most nearly secured. Then it was necessary that the subjects of study of those pupils under consideration should be as far as possible, the same. The differentiation of the high school courses, either junior or senior, would prevent this, so that only schools were chosen

[2] The selection of the three highest grades has an advantage in that the early effects of language difficulties on the part of the foreign-born are generally presumed to be largely eliminated, and while the effects of such difficulties may be felt still in the matter of retardation, they will not be so appreciable a factor in the school marks for the grades studied. On the other hand, there is the difficulty that the children may have been in the schools so long that national or racial differences have been neutralized by the school influence, so that initial differences may not persist. In answer, it may be said that if no appreciable differences are found, the latter supposition may be assigned as one reason for such lack of difference. On the other hand, if differences are found which seem to be based upon nationality, the conclusion that there are national differences is definitely strengthened by the fact of the higher grades being used. The sequel will show whether the need for further study of the lower grades is desirable.

[3] The compulsory age law in Minnesota provides that children must attend school between the ages of eight and fourteen, or if the eighth grade be not completed, between the ages of eight and sixteen.

Digitized by Google

in which there was the greatest uniformity of subject matter offered to the pupils.

From the thirteen schools investigated, 2653 questionnaires were collected which were filled out sufficiently to be of some value in the study. As is inevitable in such a canvass, all questions were not answered on all blanks, so that blanks which had to be rejected for some studies were yet available for others. Accordingly, the number of totals in the succeeding tables will not always agree. In the case of comparisons with school marks, also, the total number was not available, owing to the fact that in a number of cases, the pupil had come from another school or city so recently that his marks were not available for comparative purposes.

From the school records were taken the marks made by the pupils for the preceding term in each subject, the age of the pupil on entering school for the current school year (September 1917), and where it was available, the record of health and vital statistics. As this part of the study was made in the second semester of the year 1917–18, the marks recorded were those given at the close of the semester just completed, and therefore were susceptible of explanation by the teachers, where questions arose difficult of interpretation. The marks were in most cases given on a monthly basis, so that in most schools there were four marks recorded in each subject, indicating the relative improvement or retrogression during the semester in each case. This feature was of especial value in evaluating the work of repeaters or notably retarded pupils. As has been said, principals, teachers, and in some cases, the school clerks and nurses were interrogated by way of explaining cases otherwise baffling, or by way of checking apparent errors. The pupils were not interrogated directly by the investigator, nor were their parents approached, save in isolated instances.

Digitized by Google

CHAPTER IV

NATIONALITY FACTORS COMPOSING THE SCHOOL POPULATION

Birthplace of parents and grandparents.

a. As has been already pointed out, provision was made in the investigation for determining the birthplace not only of parents, but also of grandparents of the children under observation. This makes it possible to carry the investigation farther back than is done by the United States Census, and to determine more accurately the actual origin of the school population. That this is important will be shown later, when the persistence of foreign language in the home of the foreign born is studied. However, by way of indicating the immediate origins, the following analysis of the birthplace of parents is given:

2544 cases were reported accurately enough for consideration.

809 of these pupils were children of American born parents.

1111 were children of foreign parents, of "unmixed" nationality, representing 23 nationalities.

165 were children of foreign born parents, of "mixed" nationality, (e.g., one parent German, the other Norwegian), representing 43 such mixtures.

459 were children of "mixed" parents (e. g. one American born, the other foreign born). There were 22 of these combinations.

b. In view of the great number of groups of parents, and the numerous mixtures it seemed wise to go back one more generation, and determine how many of these parents were of native born, foreign born, or "mixed" parentage. Accordingly the birthplaces of grandparents were tabulated, thus giving a better index of the true origin of the children

Digitized by Google

than could be determined from the birthplaces of parents only. When this tabulation is examined, the real process of amalgamation of various nationalities into one American type is seen at its best, and the process thus exhibited is startling even to those who have long accepted as a platitude the simile of the melting-pot. The children, 2490 cases, are divided into groups, in order to show their polyglot origin, thus:

1. All four grandparents born in America. (Native born.)
2. Three grandparents born in America, one foreign born.
3. Two born in America, two foreign born, the latter "unmixed."
4. Two born in America, two foreign born, the latter "mixed."
5. One born in America, three foreign born, the latter "unmixed."
6. One born in America, three foreign born, two of the three "unmixed."
7. One born in America, three foreign born, all different nationalities.
8. All four foreign born, of the same nationality ("unmixed").
9. Four foreign born, three "unmixed."
10. Four foreign born, two of one nationality, two of another.
11. Four foreign born, two of one nationality, two "mixed."
12. Four foreign born, all "mixed," i.e. of different nationality.

The result of the grouping is as follows:

Group	1	Total	206 cases	1 nationality involved		
"	2		95 "	12 nationalities involved		
"	3		208 "	14	"	"
"	4		49 "	24	"	"
"	5		55 "	8	"	"
"	6		74 "	41	"	"
"	7		8 "	6	"	"
"	8		1,385 "	31	"	"
"	9		65 "	35	"	"
"	10		293 "	69	"	"
"	11		52 "	38	"	"
"	12		0 "	0	"	"
		Total	2,490	279		

Digitized by Google

Thus it will be seen that there are, in a total of 2490 children, 279 different sources of origin! This seems almost inconceivable, but will become plain on a study of the tables of distribution which follow. It will be found interesting to notice the varied character of the intermarriages, and the way in which national characteristics must of necessity be merged into some new type. The nature of that new type is, beyond question, the concern of the American school before any other governmental agency.

A study of the different groupings and mixtures will bring out the fact that in a third generation there is still, in a majority of cases, a predominance of some one original nationality. Where the ancestry is "four parts alike," or "unmixed," this is clear. Where there are three grandparents of one nation, and only one of another, the predominance of the one is still unquestionable. And when there are two grandparents of one nationality, and the other two of differing nationalities, the predominance of the two who are alike must be conceded.[1] On the other hand, the cases of two of one nationality and the other two of another may be considered as equally mixed, whatever the actual biological significance may be. This holds true, also, in the few cases where all four grandparents are of different nations.

For purposes of comparison, therefore, it has seemed wise to form a new grouping of the predominants, and to use this as a basis of comparison as to various traits, with the feeling

[1] *Heredity*, by J. A. Thomson, N. Y. G. P. Putnam's Sons; London, John Murray. 1910. Page 517. Social Aspects of Heredity. "We have defined heredity as the genetic relation between successive generations, and inheritance as all that the organism is or has to start with in virtue of its hereditary relation to parents and ancestors. . . . The great generalisation known as Galton's Law of Ancestral Inheritance, according to which inheritances are on an average made up of a half from the two parents, a quarter from the four grandparents, an eighth from the great-grandparents, and so on may require some adjustment as regards the precise fractions, and in relation to cases of inter-crossing, but the general fact seems to have been well established, and it is eloquent."
See also pages 50, 51 and 323.

Digitized by Google

that a grouping based upon origin of grandparents will be more trustworthy in making final conclusions, than one based on the immediate parentage. The grouping on the basis of predominants is shown in Table v.

The groups shown in Tables v and vi are numbered wherever there seems to be a sufficient number of cases to warrant comparisons with reference to grades, school advancement, marks, and other data. These comparisons will be considered later in the study, as the purpose in this place is simply to show the varied number of mixtures that occur, the ways in which intermarriages mingle the blood of all nations, and the consequent social and educational problem. With reference to the second point, the tables seem to show that while intermarriages between northern European nationalities are frequent, the influence of the Ghetto tends to keep the Southern European groups in a purer state. There are not enough cases of non-Jews to indicate whether the intermarriage of southern Gentiles would tend to become more frequent than of Jews, although the fact that there are certain Italian-Irish and Italian-Swedish alliances might indicate a trend toward the same type of intermarriage as more clearly shown for the northern groups, wherever propinquity occurs. The figures, however, warrant no conclusions, unless the fact of the indiscriminate mixtures of the northern nations may be considered as giving a basis for reasoning that, given analogous conditions of mixed residence in our cities, the same mixtures would occur, whatever the nationalities involved. This is a sociological study which is rather aside from the present inquiry.

Birthplace of children.

c. A phase of the problem which can not be overlooked is the actual number of children who were themselves born in a foreign country, and so may be presumed to have an even

Digitized by Google

TABLE V

GROUPING OF SCHOOL CHILDREN BY NATIONALITIES INDICATED BY BIRTHPLACE OF GRANDPARENTS, ON A BASIS OF PREDOMINATING COUNTRIES OF BIRTH

1. Americans, four grandparents native born		206	
three grandparents native born, one foreign born		95	
two native born, two foreign born, but in different countries		49	350
2. Great Britain, selected as above:			
Canada		29	
England		46	
Ireland		54	
Scotland		11	
Wales		2	
Equal mixtures within the United Kingdom		23	165
3. Germany		147	
Luxembourg		1	
Switzerland		6	
Equal mixtures of above		23	177
4. Norway			215
5. Sweden			420
6. Austria-Hungary			
Austria, including Jews		51	
Bohemia		21	
Hungary		12	
Slavonia		1	
Slovak		40	
Equal mixtures of above		4	129
7. Roumanian Jews			99
8. Russian Jews			336
9. Poland (German, Russian and Austrian)			38
10. Finland			45
11. Denmark			22
12. Italy			18
13. Belgians, French, Dutch, Greeks			9
Total			2,023

Digitized by Google

TABLE VI

GROUPING OF SCHOOL CHILDREN BY NATIONALITIES INDICATED BY BIRTHPLACE OF GRANDPARENTS, SHOWING MIXTURES WHERE NO COUNTRY OF BIRTH PREDOMINATES

13.	Two American, two Great Britain	91	
14.	two German	64	
15.	two Norway	20	
16.	two Sweden	25	
	two others (miscellaneous)	8	208
17.	Two Great Britain, two Germany	24	
18.	two Norway	12	
	two others	18	54
19.	Two German, two Norway	14	
20.	two Sweden	15	
	two others	14	43
21.	Two Norway, two Sweden	78	
22.	two Denmark	14	
	two others	9	101
	Two Sweden, two others		12
	Two Austrian, two others		10
23.	Two Russian Jew, two Roumanian Jew	16	
	two others	3	19
	Unclassified		2
	Each grandparent of a different nationality		8
24.	Negroes, full blood, or mixed		10
			467
	Predominants, brought forward from Table V		2,023
	Grand Total		2,490

greater handicap in their school progress than those who are born of foreign parentage in this country. Table VII gives the facts for this group. Of the 2490 cases studied, but 185 were themselves foreign born. The only country

Digitized by Google

which has a sufficient representation in this class to be in any sense important is Russia. Seventy-eight of the Russian Jewish children were born in Russia, and nine of them were born in England, a total of 87 in all. Of these 45 were located in the Grant School, and nearly all of the others in the Franklin of St. Paul (31 in fact).

It is hardly necessary to comment further on this table, for it will be seen at once that outside of the Jewish group

TABLE VII

TABLE SHOWING DISTRIBUTION OF PUPILS BORN IN FOREIGN COUNTRIES, BY SCHOOLS

School	Number born in foreign country:	School	Number
Adams	20	Harrison	13
Bryant	5	Holland	8
Calhoun	7	Motley	4
Clay-Jackson	23	Prescott	7
Franklin	43	Sibley	2
Grant	51	Van Buren	2
		Total	185

TABLE SHOWING DISTRIBUTION OF PUPILS BORN IN FOREIGN COUNTRIES, BY PLACES OF BIRTH

Country of Birth	Number	
Russia	78	
Canada	23	
Roumania	15	
Norway	15	
Sweden	11	
England	13	(includes 9 Russian Jews)
Austria	10	
Scattering*	20	(not more than 3 from any 1 country)
Total	185	

*"Scattering" includes Italy, Denmark, South America, South Africa, Iceland, Finland, Poland, Germany, et al.

Digitized by Google

there are so few belonging to any one nationality group or to any one school that there is every ground for the statement that the present inquiry is concerned not with the problem of teaching the foreignborn, but of administering to the needs of the children of the foreignborn, and to their children's children.

Language persistence in the home.

d. A careful study was made of the parents who were foreign born, in order to discover whether the language of birth persisted as the language of the home, even after a period of years. For this purpose, the parents were listed separately so as to get the comparison for both fathers and mothers, where they were intermarried with American or English born. The tables which follow give the foreign born who speak English in the home—a good sign of their Americanization, in the popular estimate; the native born who nevertheless speak a foreign language as the home language; a grouping of the foreign born who cling to their native language, showing how many years they have lived in this country; and finally, a table showing the comparisons by percentages, of the various nationalities involved. This last table brings in some surprising information. Despite the campaign of propaganda for "Kultur" in America with the Pan-Germanic dream of a German-speaking United States in the next century, the Germans head the list in acquiring the English language as the medium of the home! Of 201 German parents listed, 123, or 61.2% speak English habitually in the home. The next best record was made by the Danes, 26 out of 63 parents speaking English—41.3%. The poorest showing was made by the Finns, only one out of 86 using English. The Slovaks are not much better, five out of 77 having given up the home tongue. And the Scandinavians, generally considered to be loyal Americans, do not

Digitized by Google

show up as well as one would expect when only 33% Swedes and 32.3% Norwegians have acquired the new language as a part of their new heritage. These figures must be studied in the light of the accompanying statistics, showing the length of time the non-English speaking parents have lived in this country. When it is noted that 11% of the Germans, 17% of the Swedes, and 19% of the Norwegians, have lived in this country over thirty years, and still use the home language in the domestic circle, it must be confessed that this one of the generally accepted tests of Americanization throws definite doubt upon the real assimilation of these peoples. Even more significant is the case of the American born who do not speak English in the home. In nine Swedish homes, six Norwegian and five German, both parents were born in the United States, but use the language of the old country. Further, in the case of 20 native born fathers, and of 64 mothers, English has been dropped (or never adopted) as the home language! The comparative influence of the husband or the wife in determining the home atmosphere is significant in this connection.

Some cases of individual homes will make the situation better understood. A Norwegian husband married an American born wife. Altho the husband has lived in this country for 35 years, Norwegian is the home language. Another case is similar save that the husband has been here 29 years. To balance this is the case of an American born husband, of American born parents, whose Norwegian wife has been here for 30 years, but still uses the Norwegian language in the home, altho the husband speaks English at home. His independence is not shown by the American husband whose Swedish wife has been here 34 years, and still dominates to such an extent that Swedish is the language spoken by both at home! A Norwegian born husband has a Scotch born wife. The husband has lived in the United

Digitized by Google

States 45 years. Norwegian is the home language! A Swiss husband has been here 31 years; his Austrian wife has been here 28 years; they speak German in the home. An Irishman of Irish parentage married a Minneapolis born girl whose father was born in France, and mother in Germany. She speaks German in the home, he speaks English. Where a Swedish husband has a Norwegian wife, there is a natural curiosity as to the outcome. In two cases noted, the wife has had to yield and Swedish is spoken at home, but in a third case the wife came out victorious and they both speak Norwegian. These cases are noted at random, and it is not claimed that they are typical, but it can not be denied that they point to a serious condition that merits definite attention.

TABLE VIII

COMPARATIVE TABLE OF NATIONALITIES, SHOWING NUMBER AND PERCENTAGE OF FOREIGN BORN PARENTS WHO HAVE ADOPTED ENGLISH AS THE LANGUAGE OF THE HOME

Nationality	Total Parents	Number Speaking English	Percentage Speaking English
Bohemian	36	6	16.6
Slovak	77	5	6.5
Norway	396	128	32.3
Sweden	802	265	33.0
German	201	123	61.2
Austria	126	10	7.9
Danes	63	26	41.3
Finns	86	1	1.1
Roumanian Jews	234	35	15.0
Russian Jews	526	45	8.5
Italians	37	3	8.1
Average			21.0

Figure one shows this comparison in graphic form.

Digitized by Google

TABLE IX

PERSISTENCE OF FOREIGN LANGUAGE SHOWN BY NUMBER AND PERCENTAGES OF FOREIGN BORN PARENTS, WHO RETAIN THE FOREIGN TONGUE AS THE HOME LANGUAGE, ALTHOUGH THEY HAVE LIVED IN AMERICA TEN YEARS OR MORE

NATIONALITY	Total Parents	YEARS LIVED IN THE UNITED STATES						Total %
		10–19 inc.		20–29		30-more		
		No.	%	No.	%	No.	%	
Germany	201	14	7.0	9	4.4	22	10.9	22.3
Denmark	63	5	7.9	7	11.1	5	7.9	26.9
Norway	396	69	17.4	48	12.1	76	19.2	48.7
Sweden	802	93	11.6	166	20.7	134	16.7	49.0
Austria	126	30	23.8	23	18.2	12	9.5	51.5
Roumanian Jew.	234	123	52.6	18	7.7	5	2.1	62.4
Italians	37	5	13.5	16	43.2	3	8.1	64.8
Bohemians	36	6	16.6	10	27.7	10	27.7	72.0
Slovak	77	22	28.5	20	25.9	18	23.3	77.7
Russian Jews	526	237	45.0	145	27.5	32	6.1	78.6
Finnish	86	38	44.1	23	26.7	14	16.2	87.0
			Aver. 24.4		Aver. 20.4		Aver. 13.4	58.2

Two Swedes, one German, one Finn, and one Russian have lived in this country fifty years, and still speak the home language! Six Norwegians and five Swedes have been in this country forty-five years or more, and speak their native language in the home.

These comparisons are shown graphically in figure 2.

The tables show conclusively that only a fifth of our immigrants adopt English as the language of the home, and that more than one half will not speak English even after they have lived here for ten years or more. More than that, there is a tendency to continue the foreign language in the home during the second generation, even in the case of marriage with one of different nationality.

The condition is one that certainly needs attention, although it is a question how far the school can combat the tendency, or how far it should. The movement to insist on English as the language of instruction in all schools will certainly prove the most effective method of dealing with the situation, unless the laws governing naturalization be amended to refuse citizenship to all who are not willing to

Digitized by Google

FIGURE I (on left)
Showing comparative percentages of foreignborn parents who speak English in the home
Neutral zone indicates foreignborn parents who have been in the United States less than 10 years, and speak the foreign language in the home

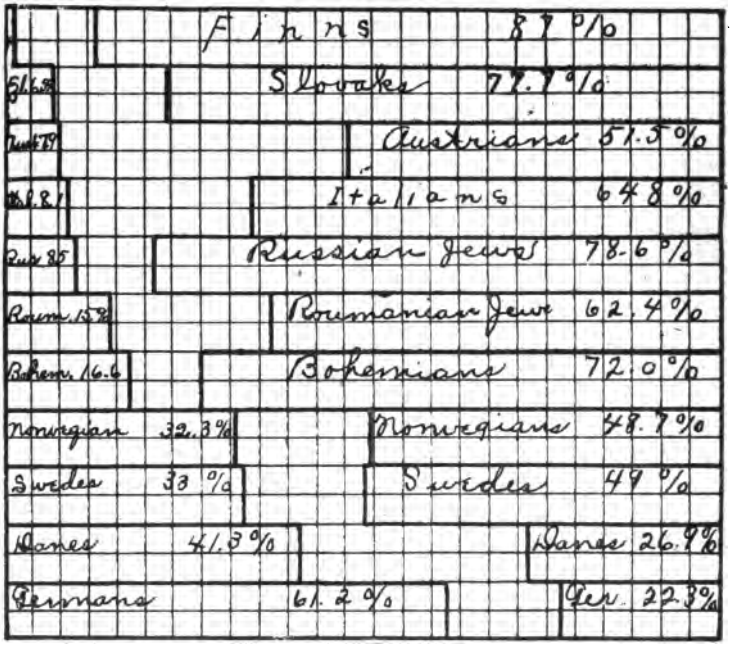


FIGURE 2 (on right)
Showing comparative persistence of foreign language in homes of foreign-born parents who have lived in the United States 10 years or longer

adopt the language of the country as well as its laws. This last expedient would involve insisting that the wife in the home learn the new language as well as the husband who needs it as an economic necessity. The refusal of many of the foreign born women to learn the English language is largely responsible for the continuance of the language in

Digitized by Google

the home. Another potent factor is the influence of pastors of the churches, who believe that the only way in which they can maintain their hold on their flocks is to preach in the home tongue.

If the test of fitness for citizenship were: first, that not only the applicant, but also his family, were able to speak English; second, that the applicant were able to adduce proof that he was in the habit of reading newspapers printed in English; and third, that if a church attendant, the applicant attended services conducted in English, there would be quite definite evidence that he was really assimilated. Without such evidence, there would remain a serious doubt. Thus the movement extends far beyond the scope of the school.

Digitized by Google

CHAPTER V

NATIONALITY AND SCHOOL PROGRESS

The comparison of nationality and school progress will be considered under three general heads; (1) its relationship to retardation; (2) its relation to acceleration; and (3) its relation to school marks.

1. *Retardation.* Basis of computation. In a study of this sort, where there is a desire merely to make certain comparisons between groups of pupils in the same system and with no idea of working out a survey of an entire school system or of comparing the system with any national or sectional standards of retardation, there is really no need for conforming to accepted standards, or of meeting any uniform requirements. Yet, inasmuch as it was felt that the most satisfactory results would follow an application of generally accepted methods unless they were discovered to fall short of giving a satisfactory basis for comparative results, the attempt was made to apply a scientific age-grade table which would fit the situation. As the measure of normal age for a given grade should be refined as much as possible to meet actual conditions, it seemed best to apply the standard of Dr. F. P. Bachman as given in his "Problems of School Administration," under the heading of "Objective Standards of Measurement," following the general plan of the age-grade Table XL, p. 224, where the normal age limit of entering the 1A Grade is given as 6 to 6½, of entering the 1B as 6½ to 7, and so on. The normal time for completing these grades would be 1A, 6½ up to 7; for 1B, 7 up to 7½; and so on. These measures are much refined and restricted, when the limits of Grade 1 from 6 to 8, as given

Digitized by Google

by Ayres,[1] or from 6 to 7, of Strayer,[2] are considered. And yet when a system is studied which employs half yearly promotion, it is evident that such refined measures come to meet the exact conditions, and are quite scientific in application. Under the conditions of Minneapolis and St. Paul, where six years is the legal minimum age for first entering school, and is commonly interpreted as meaning that a child who has reached his sixth birthday is thereby qualified to enter school, but one who has not completed his fifth year, is not qualified, it is evident that the Bachman standard would be satisfactory, save only that there should be a further refinement made to meet the divisions of the school year, so as to give an exact measure for completion of each grade. By this is meant a determination of the exact age at which a child not quite six years of age in September, would be when he enters school at the second semester of the year, and the corresponding age which a child who is too young to enter in February would reach when he actually enters in September. Thus, generally speaking, the term opens in the first week in September and the second term, the first week in February,[3] in the Twin Cities. So a child entering the First Beginning grade (known in Minneapolis and St. Paul as the 1B grade) at the age of six years and no months, in September, would be six years and five months of age when he completed the 1B grade by February 1.

The child entering the 1B grade on February 1 would be six years and five months old when he completed the grade at the close of the year in June. But this latter child would be six years and seven months of age before he could enter

[1] "Laggards in Our Schools," p. 38.

[2] "Age-Grade Census of Schools and Colleges," p. 12.

[3] For the school year, 1917–18; in 1918–19 the 3-quarter system was introduced.

Digitized by Google

the 1A Grade in the following September. Or to put it in another way, the child who is five years and eleven months of age on February 1, and therefore ineligible to enroll, would be six years and six months of age, before he could begin the 1B Grade legally in September. Therefore, to be strictly accurate, one would put the entering age for Grade 1B in September at from six years to six years and seven months, inclusive, and the entering age for Grade 1B in February as from six years to six years and five months, inclusive. This would make the corresponding ages for the last six divisions of the elementary grades which were studied in the investigation, range as follows:

Normal age limits for Minneapolis on Sept. 1, of any year:

Grade 6B,	11	years,	no	months	to 11	years, 7	months, inc.
6A,	11	"	7	"	to 12	" 0	" inc.
7B,	12	"	0	"	to 12	" 7	" inc.
7A,	12	"	7	"	to 13	" 0	" inc.
8B,	13	"	0	"	to 13	" 7	" inc.
8A,	13	"	7	"	to 14	" 0	" inc.

This "cross section" of the ages which would be normal for any one of the six grades shown is of course based on the actual ages which would be normal in accordance with the the conditions already indicated, and so the apparent overlapping of one month in each successive grade is accounted for by the differing times of beginning, i.e., September and January. This "cross section" was used as a measure of the relative retardation or acceleration of the pupils under observation, and as has already been said, it is immaterial whether it is scientific or not, in view of the fact that all that was sought was some agency for determining a rational dividing line for comparative purposes. The result proved that it was a satisfactory line for the Minneapolis children, for out of 2070 cases examined, 854 retardates and 678 accelerates were found. But when the same scale was

Digitized by Google

applied to the 405 St. Paul cases available, it was found that there would be an undue number of retardates and practically no accelerates! Therefore, while a uniform scale might be of value for comparative studies of the total number of schools under consideration, yet to draw conclusions concerning groups of nationalities under supposedly constant conditions there must be approximately the same number of accelerates as of retardates; otherwise a relative comparison of the advanced with the retarded pupils or groups would be impossible. So a new basis was sought for the St. Paul schools. Obviously the simplest way out was to take the median age of each grade, and with this as a basis, work out a table with the same relative inclusive limits as for Minneapolis. This was done, with the following results:

Normal age limits for St. Paul on Sept. 1 of any year, based on median ages for Grades VI, VII, VIII, in three schools.

Grade 6B,	11	years,	6	months	to 12	years,	1 month,	inc.
6A,	12	"	1	"	to 12	"	6 "	inc.
7B,	12	"	6	"	to 13	"	1 "	inc.
7A,	13	"	1	"	to 13	"	6 "	inc.
8B,	13	"	6	"	to 14	"	1 "	inc.
8A,	14	"	1	"	to 14	"	6 "	inc.

Trying this table on the 405 cases, there were found 145 retardates and 166 accelerates—a slightly different percentage from the Minneapolis group, but near enough to be satisfactory for group comparisons. In the case of each city, there was a group of 25% in the "normal age" group, as compared with 75% who were in the retarded-accelerated group. And for the total number of cases from both cities, 2475, the total retardates were 999 and the total accelerates, 834.

1. *Study of the Retardates by Nationality Groups.* The retarded pupils were grouped under the 25 heads indicated in the division into nationalities according to the

Digitized by Google

predominance of nationality as shown by countries of birt
of grandparents, and summarized in Tables v and vi. Th
results are shown in Table x following:

TABLE X

DISTRIBUTION OF RETARDATION ACCORDING TO NATIONALITY GROUPS

Group	Nation	Total Cases	Number Retarded	Percent Retarded
1	U. S.....	350	112	32.0
2	Grt. Brit.....	165	56	35.1
3	Germany.....	177	76	42.9
4	Norway.....	215	107	49.7
5	Sweden.....	420	173	41.2
6	Austria-Hungary.	129	63	48.8
7	Roumanian Jew..	99	24	24.2
8	Russian Jew.....	336	153	45.5
9	Poland.....	38	21	55.2
10	Finland.....	45	22	48.8
11	Denmark.....	22	11	50.0
12	Italy.....	18	11	61.1
	Total.....	2,014	831	Ave. 41.2 Median 47.2

Digitized by Google

TABLE XI

DISTRIBUTION OF RETARDATION ACCORDING TO NATIONALITY GROUPS SHOWING RETARDATION OF "EQUAL MIXTURES"

Group No.	Nations	Total Cases	Number Retarded	Percent Retarded
13	U. S. & Great Brit....	91	38	41.7
14	Germany.....	64	21	31.2
15	Norway.....	20	6	30.0
16	Sweden.....	25	7	28.0
17	Great Brit. & Germany	24	7	29.1
18	Norway.....	12	7	58.3
19	Germany & Norway..	14	6	42.8
20	Sweden.....	15	4	26.6
21	Norway & Sweden....	78	26	35.9
22	Denmark.....	14	6	42.8
23	Roumanian & Russian Jew.....	16	3	18.7
24	Negro.....	10	7	70.0
	Total.....	383	140	Ave. 36.8 Median 33.6

The Negroes are included in this group on account of the fact that the cases observed all seemed to be of mixed blood.

Digitized by Google

2. *Acceleration.* It will be readily seen that there a definite differences in the percentage of retardation in t various groups. But it is desirable to investigate t accelerates in the same way, before coming to any conclusio for unless the groups which stand well in respect to retard tion also stand above the average in acceleration, no co clusions can be drawn. So a similar comparison of pupi accelerated follows:

TABLE XII

DISTRIBUTION OF ACCELERATION ACCORDING TO NATIONALITY GROUPS

Group	Nation	Total Cases	Number Accelerates	Percent Accelerates
1	U. S.....	350	136	38.8
2	Great Britain....	165	51	30.9
3	Germany.....	177	67	37.8
4	Norway.....	215	55	25.6
5	Sweden.....	420	145	34.5
6	Austro-Hungary.	129	27	20.9
7	Roumanian Jew.	99	51	51.5
8	Russian Jew.....	336	102	30.3
9	Poland.....	38	5	13.2
10	Finland.....	45	15	33.3
11	Denmark.....	22	9	40.9
12	Italy.....	18	6	33.3
	Total.....	2,014	669	33.2
				Median 33.3

Digitized by Google

TABLE XIII

DISTRIBUTION OF ACCELERATION ACCORDING TO NATIONAL GROUPS, SHOWING ACCELERATION OF "EQUAL MIXTURES"

Group	Nations	Total Cases	Number Accelerates	Percent Accelerates
13	U. S. & Great Brit....	91	38	41.7
14	Germany.....	64	20	31.2
15	Norway.....	20	9	45.0
16	Sweden.....	25	11	44.0
17	Great Britain & Germany.....	24	11	45.8
18	Norway.....	12	3	25.0
19	Germany & Norway..	14	6	42.8
20	Sweden.....	15	8	53.3
21	Norway & Sweden....	78	30	38.4
22	Denmark.....	14	4	28.5
23	Roumanian & Russian Jew.....	16	6	37.5
24	Negroes.....	10	3	30.0
	Total.....	383	149	38.9 Median 40.1

In analyzing these tables there will be noted at once a very decided difference in range between the groups. Looking first at the pure national groups, a range of from 24.2% to 61.1% is noted in the retardates, and a range of 13.2% to 51.5% in the accelerates. The expected rule of "low retardation, high acceleration," does not hold entirely, however. With so large a range and so small a number of groups, neither the median nor average is a very satisfactory measure. However, we see Roumania standing first in each list, with only 24.2% retardates, and 51.5% accelerates. The United States is second in low retardation, and third in high acceleration. Great Britain is third in retardation,

Digitized by Google

but eighth in acceleration. Sweden is fourth in retards, and fifth in accelerates, and Germany interchanges with her, being fifth in retards, and fourth in accelerates. Poland, eleventh in retardates, is twelfth in accelerates, but Italy, twelfth in retards, is sixth in accelerates, and Denmark, tenth in retards, is second in acceleration.

FIGURE 3 (on left)
Relative retardation of various national groups by percentages of number retarded to whole number in the group
Neutral zone shows percentage normal in age-grade distribution

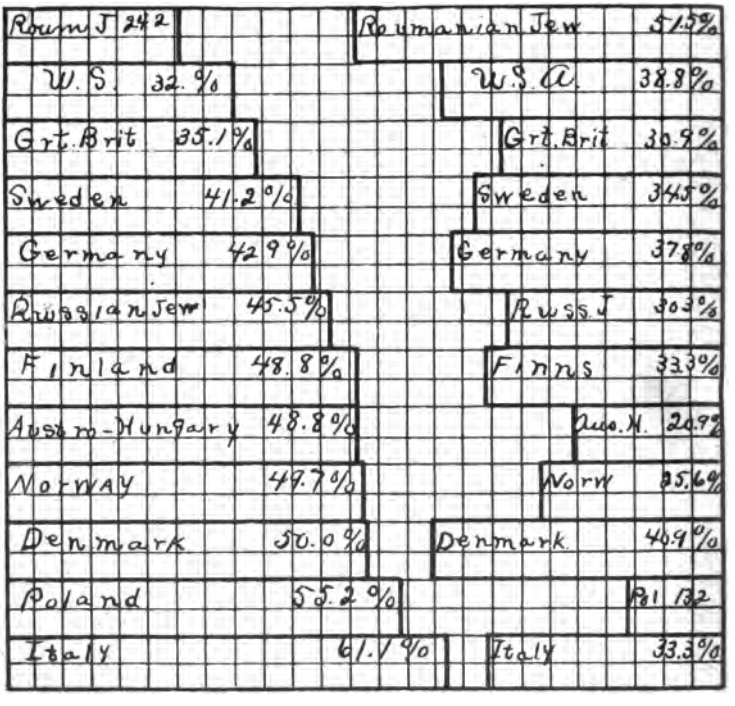


FIGURE 4 (on right)
Relative acceleration of various national groups, by percentages

Digitized by Google

A study of the equally mixed groups gives us some idea of the effect of intermarriage. The alliance of Norwegians and Swedes produces a distinctly higher percentage of accelerates and lower percentage of retardates than in either nationality when pure. The Scandinavians, also, seem to improve when allied with Americans. The Russian Jews also improve as a result of marriage with the Roumanians, and the latter improve in percentage of retardation. The Norwegian Danish alliance is advantageous to the former, but not so happy for the latter. In fact, the only Scandinavian alliance which does not show a distinct gain is that of the Norwegians with the United Kingdom. Americans and Germans do not show a marked tendency in either direction, and the same may be said of the Great Britain group.

All in all, there is enough difference between groups to add weight to the contention that there is a difference in the tendency of nationalities to vary in the matter of retardation. Further comment will be reserved until the comparison on a basis of school marks.

3. *Comparison of national groups on a basis of school marks.* The method of procedure in securing and evaluating the school marks is necessarily to be explained before taking up the results of the comparisons of nationality groups.

The investigation was made during the second semester of the school year, and it was therefore possible to get access to the teachers' registers giving the records of each pupil in each subject for the semester just closed, and also his final promotion mark, or his record of non-promotion. Therefore this record was made the basis of the comparison. The marks were transferred directly from the teacher's registers, and thus had the advantage of being taken from the original entries rather than from transcripts filed in the principal's office, or in a central office. This made for accuracy, and

Digitized by Google

made it possible to consult teachers and principal about doubtful cases or about seeming inconsistencies or incongruities.

The marks were recorded presumably on a monthly basis, but there was no uniform ruling in the schools as to the number of entries required for the semester. Thus some of the schools entered three marks in each subject for the semester, some four and some five. The marks were designated by letters, except in the case of two St. Paul schools. In Minneapolis the symbols were: A, highest, B, very good, C, medium, D, poor, F, failure. In a few cases a grade of E was given, meaning "conditional." As the departmental system was used in the last three grades in most of the schools, in many cases no average grade for the semester was given, but the pupil was promoted by subject. Accordingly it became necessary to work out an index of comparison, that each pupil might be ranked both in individual subjects, and in an average of all subjects. A basis was sought which might admit of a definite ranking whereby a fine enough unit might be used to prevent an undue number of "ties," and after considerable experimentation, the following plan was adopted:

In most cases, marks were entered three times in each subject for the semester. If the three marks were all "A," thus, A-A-A, the combination was given an arbitrary value of 10, on a numerical basis. If the mark for one month was "B," one point was deducted. Thus the combinations A-A-B, A-B-A, B-A-A, were given a value of 9. In like manner the combinations A-B-B, B-A-B, B-B-A, A-A-C, A-C-A, C-A-A-, were evaluated at 8. B-B-B, A-B-C, C-B-A, C-A-B, A-C-B, B-A-C, were given the value 7, and so on for all possible combinations, down to F-F-F, which was evaluated 0. A similar value was worked out for schools which gave four and five marks per subject during

Digitized by Google

the semester. The result was that it was possible to rank pupils in each grade and school so that there was surprisingly little duplication of grades, or "tieing," even in specific subjects, and still less in the averages, in any school. The subjects in which there was the greatest tendency to similarity in the grades assigned were the motor activities, manual training, domestic science, singing, drawing and penmanship. In many schools there was but little attempt made at a refinement of grading, or of ranking the pupils in these subjects. When the school marks of the children were taken from the teachers' registers, the expectation was that valid comparisons could be made between the progress of children in the so-called "formal" subjects of the course, and the newer "motor activity" group. Thus, it was planned to discover what differences, if any, existed in the ability to excel in arithmetic, and to do well in drawing or in manual training. But when the marks given in the latter groups were studied, it was found that so little attention was paid to discrimination between pupils in the assigning of marks, that the recorded scale meant almost nothing in the way of discriminating the achievement of the child. For example, one class of thirty-three girls in cooking in the Seventh B grade of School No. 8 were, with five exceptions, given the grade of "7" on a scale of ten, for the semester mark. This condition was duplicated in the various schools in the subjects of penmanship, manual training, music, drawing and domestic science. In these subjects, the school mark merely indicates the fact of the pupil's maintaining an average grade of work which justifies his promotion or non-promotion, without any very serious attempt to differentiate between abilities or achievements of pupils. The result of this unsatisfactory ranking of pupils was the complete abandonment of the projected study of relationships between the two differing types of school

Digitized by Google

subjects, even though the "content" subjects were graded in a reasonably satisfactory way, as contrasted with the "motor" subjects.

The marks for boys and girls were listed separately in all schools, and they were kept separate throughout the investigation. Medians and 25 and 75 percentiles were then calculated for the entire number studied in both Minneapolis and St. Paul, for the entire number of schools in each city, and for each grade separately, both for the city at large, and for the individual school and grade, for boys and girls separately. This made it possible to study the individual schools in relation to the city at large, and the results of this study gave an interesting object lesson of the value of such a study to a superintendent or supervisor, and as such is worthy to be interpolated here as a contribution to the literature of administration, even tho not strictly pertinent to the findings of this investigation.

In averaging the grades of the individual, it was found that sufficiently accurate results were obtained by carrying the computation to one decimal place only. So in listing the various grades for comparative purposes, this was the method of distribution: 10.0, 9.9, 9.8, 9.7, and so on. For the Minneapolis schools studied, the range of averages attained by any one pupil in all his subjects ranged from 10.0, the highest, made by two girls, out of a total of 2076 pupils (boys and girls) studied, down to 0.4, made by three boys out of the 2076 pupils. Within this range of 97 units, there were only four measures which had no cases to be listed. It is impracticable to show the distribution for the entire 97, so a condensed table of distribution and accompanying curve is here given in Table XIV and Figure 5. In St. Paul, on the other hand, the 409 cases listed gave a range of from 9.3 down to 6.7. It will thus be noted that there was a much less discriminating series of grades collected in the

Digitized by Google

latter city than the former. In view of the fact that there was a more general tendency to retardation in the schools studied in St. Paul than in Minneapolis, this is a surprising record. The distribution of St. Paul grades is shown in Table xv and in Figure 6.

TABLE XIV

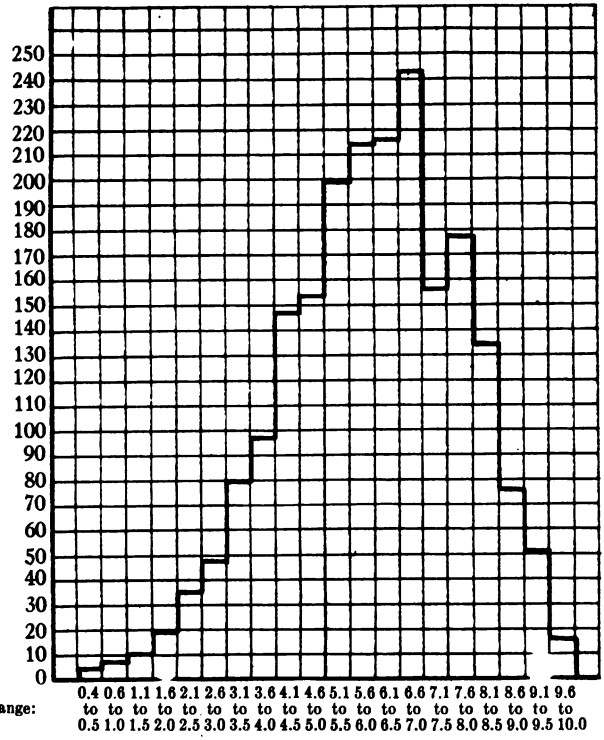
DISTRIBUTION OF AVERAGE MARKS MADE BY 2,076 PUPILS IN GRADES 6B TO 8A, INCLUSIVE, IN 10 MINNEAPOLIS SCHOOLS, IN ALL STUDIES (SUBJECTS)

Average Mark	Boys	Girls	Total Cases
9.6–10.0	0	16	16
9.1– 9.5	7	44	51
8.6– 9.0	22	54	76
8.1– 8.5	43	91	134
7.6– 8.0	57	120	177
7.1– 7.5	61	95	156
6.6– 7.0	96	147	243
6.1– 6.5	99	116	215
5.6– 6.0	110	104	214
5.1– 5.5	107	92	199
4.6– 5.0	101	52	153
4.1– 4.5	101	45	146
3.6– 4.0	68	28	96
3.1– 3.5	55	24	79
2.6– 3.0	32	15	47
2.1– 2.5	25	10	35
1.6– 2.0	14	5	19
1.1– 1.5	10	0	10
0.6– 1.0	4	2	6
0.4– 0.5	4	0	4
Total.....	1,016	1,060	2,076

Digitized by Google

FIGURE 5

Distribution of school marks, 10 schools of Minneapolis, 2076 cases



The medians for boys, girls, and total number of students in all grades, and the medians in each grade, as well as the percentile marks, are shown in Tables XVI and XVII. The determination of these percentiles makes it possible to compare each school and grade with the entire group studied, and reveals any tendencies on the part of any school or teacher to grade too far above or below the general tendency for the group. Such a study is rarely made by superinten-

Digitized by Google

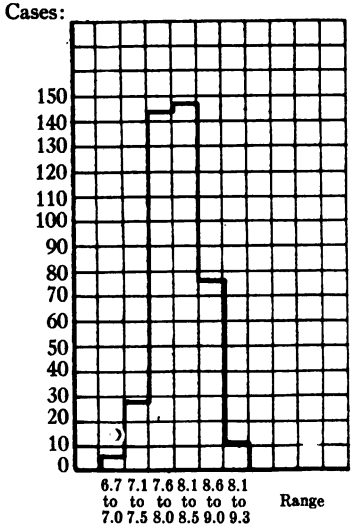
TABLE XV

DISTRIBUTION OF AVERAGE MARKS MADE BY 409 PUPILS IN THREE ST. PAUL SCHOOLS

Average Mark	Boys	Girls	Total Cases
9.1–9.3	3	6	9
8.6–9.0	17	60	77
8.1–8.5	59	88	147
7.6–8.0	84	61	145
7.1–7.5	22	5	27
6.7–7.0	3	1	4
Total.....	188	221	409

FIGURE 6

Distribution of school marks, 3 schools of St. Paul, 409 cases



dents, and where made will be a valuable aid in evaluating the work of individual schools. For this study, it was

Digitized by Google

valuable in determining the basis on which a comparison of marks should be made;—whether the comparison should be made on a basis of a quartile classification of the pupils studied with reference to the quartiles of the entire city as a whole, by grades, or to a comparison of their quartile

TABLE XVI

Grade	25 Percentile			Median			75 Percentile		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
8-A	7.0	7.7	7.4	5.9	6.8	6.5	4.7	5.9	5.2
8-B	6.2	7.7	7.2	4.8	6.4	5.7	3.7	5.2	4.4
7-A	6.7	7.8	7.5	5.7	6.7	6.3	4.5	5.8	5.0
7-B	6.6	7.8	7.4	5.5	6.9	6.3	4.4	5.9	5.1
6-A	6.5	7.5	7.0	5.4	6.2	5.7	4.4	5.0	4.7
6-B	7.0	7.9	7.6	6.0	6.9	6.5	4.4	5.2	4.9
All Grades	6.7	7.7	7.4	5.5	6.7	6.1	4.7	5.9	5.2

PERCENTILES AND MEDIANS OF MARKS MADE IN TEN SCHOOLS OF MINNEAPOLIS, AND IN EACH GRADE SEPARATELY, FOR BOTH BOYS AND GIRLS

TABLE XVII

Grade	25 Percentile			Median			75 Percentile		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
8-A	8.6	8.6	8.6	8.2	8.4	8.3	7.9	8.2	8.0
8-B	8.2	8.7	8.5	8.0	8.3	8.2	7.7	8.0	7.9
7-A	8.4	8.8	8.6	8.1	8.4	8.3	7.8	8.1	8.0
7-B	8.3	8.5	8.4	8.2	8.2	8.2	7.9	7.8	7.8
6-A	7.9	8.6	8.2	7.7	8.2	8.0	7.4	8.0	7.7
6-B	8.0	8.3	8.2	7.8	8.0	7.9	7.6	7.9	7.7
All Grades	8.3	8.6	8.5	8.0	8.3	8.1	7.7	8.0	7.9

PERCENTILES AND MEDIANS OF MARKS MADE IN THREE SCHOOLS OF ST. PAUL, AND IN EACH GRADE OF THE THREE SCHOOLS BY BOTH BOYS AND GIRLS

Digitized by Google

standing in the grade comprising their school fellows in their own school, without reference to the total number of groups. If there be any great deviations from the group medians, it is evident that there can be no valid comparisons based on the group medians—as is immediately seen on comparing Tables XVI and XVII, p. 48, which give St. Paul 75 percentiles as higher than Minneapolis 25 percentiles! It is quite evident that the pupils of Minneapolis and St. Paul can not be considered as being on an equal basis as regards marks.

Table XVIII page 50 gives the situation in Minneapolis, in the ten schools under consideration. It is an interesting situation, from the administrative standpoint. Schools deviating so widely from the median as No. 1, 2, 8, 9, evidently need some attention. It may be that there is quite a satisfactory explanation for the conditions indicated, but the principals of these schools are at least put on the defensive. It is quite certain that comparisons, based on such figures as we have here, are indispensable to the superintendent and are easily compiled in most cases, yet are rarely made an instrument of supervision. For the purpose of the present investigation the table is equally important. It is conclusive in demonstrating that the medians for the entire group can not be used for a basis of our comparison, as the standard of school No. 1 is so far removed from that of school No. 9 that they might as well be located a thousand miles apart as within the limits of the same city. Altho the table does not show this, it is the fact that the highest ranking pupil in every grade of school No. 9, except the 6A and 6B girls, is given a mark lower than the median pupil in the corresponding grade of school No. 1. In the light of conditions such as these, for this study the pupils in each school were ranked on a basis of their standing in their own class, without reference to the medians of any other school, or of the group. The marks of the boys and the girls were

Digitized by Google

kept separate in each grade. Each grade in each school was, then, divided into quartiles and a quartile rank given to each pupil according to this grouping. In this way, the pupil was ranked according to his own environment, and his relative position to his school mates was a much more natural one, than if he were compared with pupils in schools far removed from his own, either geographically or administratively. The only objection to this arrangement came

TABLE XVIII

School	8-A		8-B		7-A		7-B		6-A		6-B		All		Total
	B.	G.	B.	G.	B.	G.	B.	G.	B.	G.	B.	G.	B.	G.	
No. 1	7.4	8.2	7.4	8.6	6.5	8.2	6.5	8.4	6.6	6.8	7.0	7.7	6.8	8.0	7.4
2	7.8	6.8	5.5	8.4	6.5	6.6	6.4	7.0	6.7	7.8	7.8	7.3	6.8	7.3	7.1
*3–10	6.0	6.7	4.7	6.7	6.6	7.6	6.3	7.0	6.2	6.5	6.3	7.7	6.0	7.0	6.5
4	5.2	6.5	5.7	6.1	5.9	6.7	6.4	6.7	5.6	6.7	7.0	7.7	6.0	6.7	6.4
5	6.2	6.7	5.1	6.4	5.2	6.4	4.8	6.5	5.5	7.6	7.5	6.4	5.7	6.7	6.2
6	5.4	7.2	4.3	6.2	5.6	7.0	4.7	6.3	4.7	7.5	3.7	7.2	4.7	6.9	5.8
7	5.7	6.7	5.4	6.7	4.8	5.8	4.7	5.3	4.9	5.3	5.2	5.3	5.1	5.9	5.5
8	5.2	6.4	4.3	6.1	4.5	5.5	5.4	6.9	5.0	3.5	5.2	5.7	4.9	5.7	5.3
9	4.5	5.7	3.0	4.5	3.0	3.1	4.4	6.7	3.7	5.3	4.8	5.2	3.9	5.1	4.5

DISTRIBUTION OF MEDIAN MARKS FOR TEN MINNEAPOLIS SCHOOLS, SHOWING MEDIANS FOR BOYS AND FOR GIRLS OF EACH GRADE, AND FOR EACH SCHOOL

The range of medians for all grades is from 4.5 to 7.4.
for all boys, is 3.9 to 6.8.
for all girls, is 5.1 to 8.0

8-A	boys	4.5 to 7.8	girls	5.7 to 8.2
8-B	"	3.0 to 7.4	"	4.5 to 8.6
7-A	"	3.0 to 6.6	"	3.1 to 8.2
7-B	"	4.4 to 6.5	"	5.3 to 8.4
6-A	"	3.7 to 6.7	"	3.5 to 7.8
6-B	"	3.7 to 7.8	"	5.2 to 7.7

*Schools 3 and 10 are combined under one principal.

Digitized by Google

in the case of school No. 9, which was predominantly Russian Jewish in complexion, so that there was not as much meaning to the rankings as would have been the case with a higher admixture of other nationalities. The result was rather a ranking of a group of Russian Jews among themselves, than a comparison with other nations. Of course, this would not materially affect the final figures for other nationalities, for it would simply swell the number of Russians in each quartile, without perceptibly affecting the summary.

It will, therefore, be understood that the comparisons following are based upon the quartile distribution of the pupils in their respective schools and grades, without reference to a comparison of buildings or medians based on totals from the entire group.

The same groupings of nationalities are used as in the retardates and accelerates, but the number of cases treated will not correspond, in most groups being less. The reason is that there were a number of pupils who, on account of having just moved to the city, or having just changed schools, had not had marks given them in the school under question, and it was felt that the marks brought from the former school would not be valuable as a basis for comparison with the present classmates of the child; the reason for this is clear from the discussion of range of marks between different schools even in the same system. In a few cases it was possible to locate some pupils for marking who had not given their ages, or whose ages had to be thrown out from the computation of retardates on account of inexplicable discrepancies. For these reasons, in two of the smaller groups, the number for whom marks are given was one or two greater than in the preceding tables. Altogether, however, only 2204 cases could be listed, as against 2397 retardates.

Digitized by Google

TABLE XIX

GROUP	Nation	1st QUARTILE		2d QUARTILE		3d QUARTILE		4th QUARTILE		Total Cases
		No.	%	No.	%	No.	%	No.	%	
1	United States	94	30.2	75	24.1	78	25.1	64	20.6	311
2	Great Britain	38	26.4	41	28.5	34	23.6	31	21.5	144
3	Germany....	31	18.7	54	32.5	39	23.5	42	25.3	166
4	Norway.....	50	25.0	46	23.0	60	30.0	44	22.0	200
5	Sweden.....	98	24.4	100	24.8	110	27.3	94	23.4	402
6	Austria-Hungary.....	29	26.1	30	27.0	28	25.2	24	21.7	111
7	Roumanian Jew.....	20	22.5	26	29.2	20	22.5	23	25.8	89
8	Russian Jew.	75	24.5	78	25.5	78	25.5	75	24.5	306
9	Poland.....	9	33.3	6	22.2	6	22.2	6	22.2	27
10	Finland.....	7	14.0	16	32.0	15	30.0	12	24.0	50
11	Denmark....	4	23.5	5	29.4	3	17.7	5	29.4	17
12	Italy.....	5	26.3	3	15.8	5	26.3	6	31.6	19
	Totals....	460		480		476		426		1,842
	Medians...		24.8		26.2		25.1		23.7	

DISTRIBUTION OF SCHOOL MARKS BY QUARTILES AMONG NATIONALITY GROUPS, FOLLOWING THE NATIONALITY GROUPS BASED ON BIRTHPLACE OF GRANDPARENTS

The distribution according to the highest, second, third and lowest quartiles of school marks is given in Table XIX. It is understood, of course, that these rankings are those made in an average of all subjects carried.

By way of analysis, two additional tables are given showing the relation of the groups in terms of the highest quartile, and of the lowest quartile, as was done for retardates and accelerates.

Before accepting these figures as final, it must be pointed out that the most serious factor leading to possible error,

Digitized by Google

TABLE XX

GROUP	Nation	Total Cases	QUARTILE I		QUARTILE IV	
			Cases	%	Cases	%
1	United States...	311	94	30.2	64	20.6
2	Great Britain...	144	38	26.4	31	21.5
3	Germany.....	166	31	18.7	42	25.3
4	Norway.....	200	50	25.0	44	22.0
5	Sweden.....	402	98	24.4	94	23.4
6	Austro-Hungary.	111	29	26.1	24	21.7
7	Roumanian Jew.	89	20	22.5	23	25.8
8	Russian Jew....	306	75	24.5	75	24.5
9	Polish.....	27	9	33.3	6	22.2
10	Finland.....	50	7	14.0	12	24.0
11	Denmark.....	17	4	23.5	5	29.4
12	Italy.....	19	5	26.3	6	31.6
	Medians.....			24.8	.....	23.7

DISTRIBUTION OF SCHOOL MARKS, SHOWING RELATION TO MEDIANS IN FIRST AND FOURTH QUARTILES

aside from the inequality of the marking system already noted, is the fact that the nationalities are not distributed equally in the various buildings. Even where there is a reasonably close distribution between any two given schools, there is not the same uniformity between the classes within the schools. So this gives rise to a suspicion that the results just tabulated, while appearing conclusive, are really masking the real situation. Thus, it has already been pointed out that the Grant School has so large a percentage of Russian Jews enrolled, that the comparisons are not between the Russians and the other nationalities, but between the Russians themselves, and hence are not significant. If this same situation, while apparently not acute in other buildings, yet exists in part, it may be that there is no justification for evaluating the groups on the

Digitized by Google

quartile plan just adopted. By way of testing the situation, two devices were adopted:

a. Typical comparisons were worked out for schools in which the number of pupils enrolled belonging to the larger

FIGURE 8 (above)

Relative standing of nationality groups, based on lowest quartile of school marks

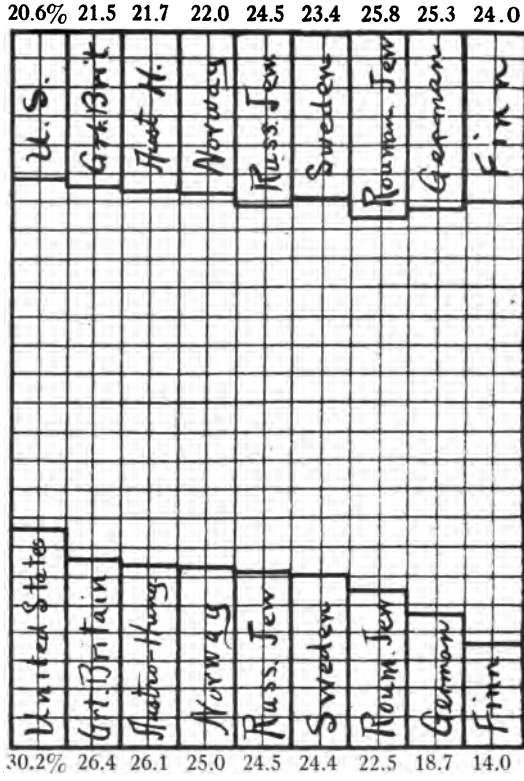


FIGURE 7 (below)

Relative standing of nationality groups, based on highest quartile of school marks

Digitized by Google

groups was sufficient to give comparisons between buildings. Such groups appearing most widely distributed were the American, Norwegian, and Swedish. In seven schools, it was possible to draw comparisons between the American and Swedish groups, and the conclusions are shown in Table XXI. It will be seen in this table that the higher standing of the American group shown in the combined table is borne out by the results of five of the seven schools, while in two, there is a slight superiority of the Swedish, so far as the highest quartile is concerned; in case of the lowest quartile, the American group excels in the same number as in the first. Thus the general superiority of the American group would be substantiated in so far as the Swedish group is concerned, based on the quartiles.

TABLE XXI

COMPARATIVE PERCENTAGES OF GROUP 1 (AMERICAN) AND GROUP 5 (SWEDISH) PUPILS IN EACH SCHOLARSHIP QUARTILE IN THE SEVEN SCHOOLS IN WHICH EACH GROUP IS REPRESENTED BY 15 OR MORE CASES

School	Group	No. Cases	Quartiles			
			I	II	III	IV
Adams	1	16	25.0	31.3	12.5	31.2
	5	64	29.7	21.9	28.1	20.3
Bryant	1	73	32.9	20.6	28.7	17.8
	5	36	30.6	19.4	13.9	36.1
Calhoun	1	104	30.9	19.1	27.6	22.4
	5	19	31.6	15.8	31.5	21.1
Clay-Jackson	1	15	26.7	40.0	13.3	20.0
	5	67	16.4	34.3	26.9	22.4
Motley	1	26	42.3	26.9	15.4	15.4
	5	25	28.0	24.0	28.0	20.0
Prescott	1	29	34.5	24.2	20.7	20.6
	5	58	13.8	25.9	29.3	31.0

Digitized by Google

Table XXII shows a similar comparison for the Norwegian and Swedish groups. For these groups it was possible to make adequate comparisons in only six schools. In three of these, the Swedes have the advantage, and in the other three, the Norwegians. The percentages are widely variant in the different schools, and when it is attempted to make an evaluation between the schools, it is found that there is a slight tendency in favor of the Norwegians, but so slight that the percentage may be disregarded, and the same conclusion drawn as in Table XX, namely, that there is practically no difference between the two groups. Thus again the data of Table XX seemed to be borne out by the second test. It was impossible to work out similar tables for other nationalities, so a further method was employed;—

b. In each school giving enough members of the groups already considered, as well as the Russian Jewish group, the

TABLE XXII

COMPARATIVE PERCENTAGES OF GROUP 4 (NORWEGIAN) AND GROUP 5 (SWEDISH) PUPILS IN EACH SCHOLARSHIP QUARTILE IN THE SIX SCHOOLS IN WHICH EACH SCHOOL IS REPRESENTED BY 14 OR MORE CASES

SCHOOL	Group	No. Cases	QUARTILES			
			I	II	III	IV
Adams.....	4	36	16.7	30.6	25.0	27.7
	5	64	29.7	21.9	28.1	20.3
Calhoun.....	4	14	21.4	14.3	35.7	28.6
	5	19	31.6	15.8	31.5	21.1
Clay-Jackson...	4	46	32.6	28.2	21.8	17.4
	5	67	16.4	34.3	26.9	22.4
Harrison.....	4	15	33.3	20.0	26.7	20.0
	5	33	24.3	21.2	27.3	27.2
Holland.....	4	31	12.9	25.8	25.8	35.5
	5	62	29.0	24.2	29.0	17.8

Digitized by Google

TABLE XXIII

TABLE SHOWING THE NUMBER AND PERCENTAGES OF VARIOUS NATIONALITY GROUPS DOING AS WELL OR BETTER THAN THE MEDIAN AMERICAN CHILD IN CERTAIN SCHOOLS

School	Nationality Groups										
	American		Swedish			Norwegian			Russian Jew		
	Cases	Med.	Cases	No.	%	Cases	No.	%	Cases	No.	%
Adams	15	5.3	63	35	.55	35	16	.45	12	5	.42
Bryant	71	7.2	35	17	.49	13	8	.62	.....	....	....
Calhoun	97	5.5	19	8	.42	14	5	.36	.....	....	....
Clay-Jackson	15	6.7	66	28	.42	48	25	.52	.....	....	....
Harrison	13	6.4	33	19	.57	15	8	.53	40	17	.42
Motley	28	7.5	25	6	.24	12	4	.33	.....	....	....
Prescott	29	6.6	57	20	.35	11	3	.27	.....	....	....
Sibley	13	8.1	20	12	.60	.....	....	....	.....	....	....
Average					.45	.....	....	.44	.....	....	.42
Average without Sibley					.43	.....	....	....	.....	....	....
Average of Adams and Harrison					.56	.....	....	.49	.....	....	....

average mark of all the American group enrolled in this school was taken. Then it was determined what percentage of the other nationality groups named made as high marks as the median American child in the school under consideration. Such a comparison was possible in nine schools for the Swedes, in eight for the Norwegians, and in two for the Russian Jews. Table XXIII gives the results in full. It will be seen when an average of the percentages in the schools indicated is taken, that 45% of the Swedes in the nine schools do as well or better than the median child of the American group. Forty-four percent of the Norwegians in the eight schools do as well or better than the Americans. If we drop out the one school in which the Swedes are represented, but the Norwegians not, we find the average

Digitized by Google

for the Swedes in the eight schools is cut to 43%, thus falling slightly below the Norwegians for the schools in which both are represented, and again substantiating the result shown in Table XX, so far as the relative standing of the two nationalities is concerned. In the two schools in which comparisons are possible with the Russian Jews, it is found that an average of 42% of this group do as well or better than the median American child in the two schools. In the same two schools, the median Swedish child does as well or better than the median American in 56% of the cases, and the median Norwegian in 49% of the cases. This relative standing of the related Scandinavian groups as compared with the Russian Jewish group agrees with the relative standings of the Scandinavian and Jewish groups as shown in Table XX. So the result of this method of evaluation indicates that the results shown in Table XX are accurate.

Thus, even without further corroborative evidence which will be brought out in Chapter VI, the conclusion may be fairly drawn that the American child of the third generation will make better school marks than the foreigner of the second or third generation. Further comment is reserved until the final chapter.

Digitized by Google

CHAPTER VI

NATIONALITY AND OBJECTIVE MENTAL TESTS

Although the conclusions drawn in the previous chapter seem to be clear-cut and definite, yet the fact remains that in estimating the school marks, there was no common standard by which to test the pupils, and the school marks, even had they all been given in the same school, would have shown the variability which always results from the personal equation. Therefore the conclusion was reached that as many as possible of the children should be given objective tests which would give a common basis for estimating their relative abilities. If these objective tests tended to corroborate the findings of Chapter V, there would be no doubt about the conclusion that national differences exist. Further, if the tests could be selected on a basis of requiring different abilities and powers of mind, they would go far toward showing why the differences already noted exist, and perhaps point out even more profound elements in the situation.

Accordingly, a group of tests was collected, which could be given as a sort of "omnibus" test to the children as a part of their regular school program under as nearly natural conditions as could be arranged. The tests finally chosen were as follows:

I. Opposites test. An opposites test of the familiar form was used, this one being devised by Dr. M. J. Van Wagenen, of the University of Minnesota. The opposites of fifty words were required, with a time allowance of four minutes.

Digitized by Google

II. Language tests. Two of the well known Trabue Language Scales were chosen, Scale B, with a time allowance of five minutes, and Scale C, seven minutes. For those not familiar with these scales, it should be noted that they test the ability of the subject in filling out incomplete sentences by the addition of such missing words as are needed to make sense.

III. Vocabulary tests. Two tests were given to test vocabulary, those chosen being tests devised by Sister Jeanne-Marie, of the College of St. Catherine, St. Paul. Test III-A and Test I-C were employed. These were made up of 56 and 58 words respectively, chosen principally from the school histories used in the seventh and eighth grades, and were words which may reasonably be supposed to come well within the range of the pupil's comprehension. Four possible choices were presented to the pupil for each word, and he was to underline the one of the four possible definitions which he thought came nearest to being correct. A time limit of seven minutes was fixed for each of these tests.

IV. Substitution or learning tests. Two of these tests were given, the form used being the type worked out by Dr. Van Wagenen, in which the subject is given a key showing a group of letters, each letter accompanied by a certain number. A list of mixed letters corresponding to those in the key is then given, and the subject required to write under each letter the number which accompanies that letter in the key. He is allowed three minutes for each test. He thus tests his speed in learning a new situation, accuracy in its application, and speed in the application.

V. Memory span tests. One of these tests was given, in which the subject wrote down a series of numbers, writing each as soon as it was called, as a test of immediate retention of digits. A series of five four-digit numbers was first given, then a series of five five-digit, than a series of five six-digit

Digitized by Google

numbers, then seven, eight and nine digit numbers. Owing to the number of each type given, only one test of this sort was used.

VI. Number completion tests. Two tests of this sort were used, being tests devised in 1918 by Miss Mary Carufel, a graduate student of the University of Minnesota, as a basis for her Master's thesis. These tests each consisted of a series of twenty-five groups of numbers. Each group of numbers was worked out according to a principle by which each number was gotten from the preceding according to a definite method. The problem of the subject was to discover this principle for each group and indicate his success by writing down the number next in order for each group or line. Three and one-half minutes were allowed for each of these tests.

VII. Geometrical forms. Two tests were given to test the ability of the pupils in estimating the component parts of a miscellaneous group of geometrical figures. The tests used were an ingenious adaptation of the form board tests used by Binet and his followers, and were developed by Mr. Oscar J. Johnson, a fellow in the College of Education of the University of Minnesota, who saw service during the war in the psychological testing corps of the Army. The subject was shown a square, triangle, or other figure, and was also shown accompanying it, two or more figures, which would exactly fit into the area of the larger figure. He was to draw lines in the larger figure to show how the smaller figures would fit into the larger. Two tests of this type were given, each consisting of seventeen forms. Five minutes were allowed for the solution of each.

It should be noted that the time allowance in each of these tests save the Trabue, was made shorter than that necessary for any but the most exceptional child to complete the test.

Digitized by Google

In this way there was an excellent opportunity to rank each child according to his ability in both speed and quality of work. Most of the tests have been carefully standardized, and the relation existing between the pairs of similar tests or scales is as follows:

(Pearson coefficient)		
	Trabue B & C,	.60−.70
	Number completion,	.81±3
	Substitutions,	.60−.70
	Vocabularies,	.72±3

While in general it may be assumed that tests involving language abilities are better measures of intelligence than non-language tests, yet if tests involving abilities which are not dependent upon language can be found which show a reasonable correlation with intelligence as shown in school marks, one may conclude that such tests will be safe to use as a partial basis of comparison with language tests. The four tests chosen for non-language tests were selected on the basis of testing different sorts of abilities, while at the same time showing a positive correlation with general intelligence as evidenced by school marks. Thus, in a group of 178 sixth grade pupils in the Minneapolis public schools, the substitution test gave a correlation of .205 with school marks in arithmetic, English, history and geography. In the same group, the geometrical forms test gave a correlation of .232 with the same marks. With a group of 127 ninth grade pupils, in the same system, the number completion tests gave a correlation of .246 with school marks. This positive correlation with school marks was felt to be a definite indication that the four tests selected will give at least as high a degree of correlation as any set of four short non-language tests might be expected to show; and while probably the Trabue, the opposites and the vocabulary tests would show higher correlations with school marks, they might at the same time be expected

Digitized by Google

to show greater degrees of overlapping. In view of these relationships, the fact that the results of the two types of tests show marked differences would give rise to a feeling that the language element might conceivably be a factor in explaining the differences apparently due to nature, altho it is impossible to fix any definite degree to which this factor enters, and it is not possible to state that it is the only factor, or even, perhaps, the most important one.

The time required to give the entire group of tests was found to be one and one-half hours. In order that there might be as much variety as possible, to lessen the strain of the test and lighten the fatigue element, the tests were arranged in an order so that the language and non-language tests would alternate. First was given the Opposites Test; second, the Substitution Tests; third, the Trabue Scales; fourth, the Memory Span; fifth, the Vocabulary III-A; sixth, the Number Completions; seventh, the Vocabulary I-C; eighth, the Geometrical Forms Tests.

The writer gave a large number of the tests personally; but he found it necessary to use assistants, three in number, who were recommended by the Department of Educational Psychology and proved to be exceptionally capable; in order to secure absolute uniformity in the giving of the tests, each assistant was furnished with complete directions for the conduct of the entire group test; these instructions were very explicit, and covered every point which could arise in the course of the test, giving the exact words to be used by the examiner. As a result of this careful attention to minutiae, remarkable uniformity of procedure marked the giving of the tests.

Since the original plan of the investigation did not contemplate the giving of objective tests, the year 1917–18 had closed before they could be given. As is well known, the fall term of 1918–19 was almost completely lost in the

Digitized by Google

public schools on account of the influenza epidemic, and so the tests were not finally given until just a year after the original question blanks were distributed—that is, in March and the early part of April, 1919. As the classes had been promoted one year, the tests could not be given to the eighth graders of 1918, as they could not be segregated in the high schools for the purpose. So the tests were given to the eighth and seventh grades of 1919, representing the seventh and sixth grades of 1918, in those schools which seemed to have the best representation of the nationalities available for the purpose. Those decided upon were the Adams, Bryant, Calhoun, Harrison, Jackson, Grant, Motley, and Prescott, all of Minneapolis. The Clay was not visited because its sixth graders of 1918 were all enrolled in the Jackson, of which it is a "feeder." The Holland was not used because there were no elements in its constituency which would add to the results obtained in the other schools, and the same holds true of the St. Paul schools. In the eight schools named, tests were given to about 1600 pupils in forty-six rooms. Those tests were then eliminated which were written by pupils who had joined the school since the previous year, or whose names were not found in the list of the previous year. The final tally showed, of the most distinctive groups, the following totals:

Group	1,	Americans,	139
Group	3,	Germans,	37
Group	4,	Norwegians,	78
Group	5,	Swedes,	159
Group	6,	Austrians,	36
Group	7,	Roum. Jews,	58
Group	8,	Russian Jews,	111
Group	10,	Finns,	28
Total,			646

Digitized by Google

Of these, Groups 3, 6, and 10 contained too few cases to be of value, and were dropped from consideration. This left five important groups for final evaluation, forming really three main divisions, namely, Americans of at least the third generation in this country, Scandinavians, involving both Norwegians and Swedes, and Jews, made up of the two related groups, Roumanians and Russians. A study was then made of the relative numbers taken from the two grades tested, for a predominance of eighth graders in the ranks of any one nationality would naturally be expected to give it an advantage in the final scoring over the others. The study showed the following proportions:

Group		Cases	Grades		
			Eighth	Seventh	% in 8th
1	American.....	139	85	54	.61
4	Norwegian.....	78	43	35	.55
5	Swedish.....	159	91	68	.57
7	Roumanian Jew...	58	27	31	.47
8	Russian Jews.....	111	44	67	.40

It was at once apparent that the American group contained too many eighth graders, and the Jewish groups too many seventh graders, to make comparisons at all valid. Accordingly, ten American eighth graders, thirty Russian Jewish seventh graders and three Roumanian Jewish seventh graders were dropped from the number. The Americans were picked at random, from each of the schools contributing, proportionate to the number represented in each school. The Jewish cases dropped were a group in which, through some oversight, one of the substitution tests was not given, and so in any case, the value of the remaining tests would

Digitized by Google

have been somewhat vitiated on that account. This gave the following adjustment:

Group		Cases	Grades		
			Eighth	Seventh	% in 8th
1	American.....	129	75	54	.58
4	Norwegian.....	78	43	35	.55
5	Swedish.....	159	91	68	.57
7	Roumanian Jew...	55	27	28	.50–
8	Russian Jews.....	81	44	37	.54

This gave a reasonably close agreement, and represented the best approximation which could be made without dropping so many cases as to cut the number in each group too small to be of value. It should be noted at this point that the conditions under which the tests were given were made as nearly normal as possible. The principals of the various buildings showed themselves more than anxious to co-operate in the most effective manner. Therefore it was possible to give the tests in the regular school period substituting them for the regular exercises of the day. This fact was found to produce a favorable atmosphere in the room, as a welcome interruption of the ordinary routine. Nearly all the tests were given at the opening of the afternoon session, so that the pupils did not become restless on account of previous school duties, nor were they fearful lest they be kept beyond the ordinary closing bell. In five cases, the tests were given at the opening of the morning session. As it developed that the schools in which these tests were given otherwise scored comparatively low, any fancied advantage from the morning hour did not appear in the final scores. It was, of course, impossible to allow for differences in weather conditions. As a matter of fact, most of the days were cloudy, gray days; there was, however,

Digitized by Google

but little difference in the temperature of the out of doors and indoors as the temperature was adjusted so that the rooms stood very close to 70°. The tendency found in most rooms was to keep them too warm, so the windows were adjusted to secure the proper result. Although the tests took an hour and a half for completion, there was very little evidence of fatigue. In a few cases where restlessness developed to a marked degree, as happened in some five of the seventh grades, a short calisthenic drill was allowed at the close of the sixth test. This was not found necessary, in most cases, and in any case did not occupy over three minutes. Neither pupils nor teachers were given advance notice of the nature or character of the tests, so that there was no opportunity for "coaching," even had there been a disposition for this. The fact that it was made clear to all principals that nothing in the way of a school survey, or of a public comparison of schools, was in progress, also removed any motive for such coaching. In two schools located in the better residence districts, the pupils had seen some of the sample psychological tests published in certain popular magazines and manifested their interest in the tests given, on account of a fancied familiarity with the tests as illustrated in these publications. Such frank expressions as these showed pretty definitely that there had been nothing attempted in the way of coaching on the part of teachers.

RESULT OF THE TESTS

The scoring of the papers was done by a committee of four persons. Each person was assigned a certain test or tests, and scored all papers in this test. Thus there was definite uniformity in scoring, especially as the mechanical means of scoring adopted in accordance with the keys furnished for each test practically eliminated the subjective element.

Digitized by Google

The scores in each test were carefully tabulated, and then were weighted for comparative purposes. The weights were taken arbitrarily, to give comparable figures in each case. The raw unweighted scores in the Opposites test were used unweighted, as the scores ran from 0 to a possible 100. The two Trabues were added together, and then multiplied by four, giving a range of 0 to 156. The vocabularies were added together, and the raw scores used as resulting, giving a range from 0 to 182. These three language tests were then combined, the weighted scores as described being added together, and the resultant scores tabulated. The two substitution tests were added, and

TABLE XXIV

SHOWING DISTRIBUTION OF GROSS SCORES MADE BY FIVE NATIONAL GROUPS IN EIGHT SCHOOLS IN THE THREE LANGUAGE TESTS, OPPOSITES, TRABUE AND VOCABULARY

Score	Nationality				
	American	Norwegian	Swedish	Roumanian Jews	Russian Jews
360–399	3	0	1	0	0
340–359	9	1	5	1	2
320–339	10	4	3	1	3
300–319	14	4	6	5	6
280–299	19	7	14	7	7
260–279	23	9	17	6	13
240–259	18	8	26	8	11
220–239	15	16	24	8	20
200–219	9	13	29	8	4
180–199	4	9	9	6	5
160–179	2	3	10	3	7
140–159	3	0	8	0	1
0–139	0	4	7	1	2
Totals	129	78	159	54	81
Medians	271.4	233.3	234.7	242.5	242.5

Digitized by Google

not further weighted. The Memory Span raw scores were multiplied by 10. The two Number Completions were added and multiplied by six. The two Geometrical Forms were added and multiplied by ten. These four weighted scores were added and tabulated as a basis for estimating the Non-Language group of tests.

Tables XXIV and XXV give the results of the tests, the measures being condensed for convenience of tabulation.

TABLE XXV

SHOWING GROSS SCORES MADE BY FIVE NATIONAL GROUPS IN EIGHT SCHOOLS IN THE FOUR NON-LANGUAGE TESTS, SUBSTITUTIONS, MEMORY SPAN, NUMBER COMPLETIONS, AND GEOMETRICAL FORMS

Score	Nationality				
	American	Norwegian	Swedish	Roumanian Jews	Russian Jews
950–1000	0	1	0	0	0
900– 949	4	0	0	0	0
850– 899	1	2	2	0	1
800– 849	3	3	5	1	1
750– 799	7	4	8	4	3
700– 749	17	8	17	4	7
650– 699	15	11	11	3	19
600– 649	16	12	26	9	12
550– 599	24	9	19	9	6
500– 549	14	6	27	4	9
450– 499	9	9	14	5	8
400– 449	9	8	17	8	8
350– 399	9	1	3	2	3
300– 349	0	2	8	3	0
200– 299	1	2	2	2	4
Totals	129	78	159	54	81
Medians	597.5	605.0	574.1	565.0	607.5

Digitized by Google

TABLE XXVI

SUMMARY OF RESULTS OF OBJECTIVE TESTS GIVEN TO FIVE NATIONAL GROUPS IN EIGHT SCHOOLS, GIVING MEDIANS, P. E. AND SIGMA VALUES AND LIKELIHOOD OF INTERCHANGE OF MEDIANS

TEST	NATIONALITY				
	American	Norwegian	Swedish	Roumanian Jews	Russian Jews
Opposites					
Median	55.4	46.8	44.9	47.0	46.5
P. E.	9.9	8.9	9.3	9.0	10.1
sigma	14.7	13.3	13.8	13.4	15.0
rel. coef	1.0	1.2	.8	1.5	1.4
Trabues					
Median	105.3	96.4	96.7	96.4	94.2
P. E.	10.9	11.2	12.0	11.6	10.9
sigma	16.2	16.6	17.8	17.3	16.2
rel. coef	1.1	1.5	1.2	1.9	1.5
Vocabularies					
Median	112.2	98.0	98.1	107.0	107.5
P. E.	18.8	22.7	21.4	20.5	19.1
sigma	27.9	33.6	31.8	30.4	28.3
rel. coef	2.0	3.2	2.1	3.4	2.6
All Language					
Median	271.4	233.3	234.7	242.5	242.5
P. E.	32.0	33.4	35.9	32.0	34.7
sigma	47.5	49.5	53.3	47.5	51.5
rel. coef	3.4	4.7	3.5	5.4	4.7
Substitutions					
Median	154.9	156.7	152.2	149.5	161.5
P. E.	22.4	22.3	22.2	31.6	29.6
sigma	33.2	33.1	33.0	46.8	43.9
rel. coef	2.4	3.1	2.2	5.3	4.1

Digitized by Google

TABLE XXVI—*continued*

TEST	NATIONALITY				
	American	Norwegian	Swedish	Roumanian Jews	Russian Jews
Memory Span					
Median	161.2	144.2	140.4	163.3	160.7
P. E.	30.7	27.3	27.8	30.0	33.4
sigma	45.6	40.5	41.2	44.5	49.6
rel. coef.	3.3	3.8	2.7	5.0	4.6
No. Completion					
Median	160.2	177.0	159.0	171.0	165.5
P. E.	58.1	51.5	52.5	57.9	56.7
sigma	86.0	76.3	77.4	85.8	84.1
rel. coef.	6.3	7.2	5.0	9.8	7.8
Geom. Forms					
Median	152.8	141.4	144.5	107.5	105.5
P. E.	39.2	42.3	37.0	35.6	34.9
sigma	58.1	62.8	55.0	52.8	51.8
rel. coef.	4.2	5.9	3.6	6.0	4.8
All Non-Language					
Median	597.5	605.0	574.1	565.0	607.5
P. E.	82.3	98.0	87.8	94.5	93.1
sigma	122.0	145.3	132.6	140.2	138.0
rel. coef.	8.9	13.7	8.7	16.0	12.8

Table XXVI gives a summary of the results of all the tests, in terms of medians, and in this are also included the P. E. values, the sigma values, and the "coefficient of reliability" or measure of reliability of the medians. Inspection of the language tests shows a marked superiority of the American group over the other two related groups in every case. The close relationship of the two elements of the Scandinavian group, and of the two elements of the Jewish group, is also

Digitized by Google

very marked, in each test. In the Opposites and Trabue tests, which are essentially measures of the general language ability of the child, there is very little difference between the two foreign divisions; but in the Vocabularies, which tested ability to define words in the child's reading vocabulary, and especially his school reading vocabulary, the Jewish group is definitely better than the Scandinavian. Accordingly the Jewish group shows a corresponding advantage over the Scandinavian, when the comparison is made of all the language tests combined.

Inspection of the non-language tests reveals a different story. Here the American group displays no marked superiority over the related groups, save in one instance. In fact, the American median is definitely below that of the other groups in several instances. There is still general agreement between the component parts of the two related groups, but not in so marked a degree, for in the case of the Substitutions, the Russian median is decidedly higher than the Roumanian, and in the Number Completion, the Norwegians quite surpass the Swedes. This latter case was explained by a definitely heavy grouping of the measures around the zero mark. This resulted from the fact that the instructions given the pupils proved difficult of comprehension to a large number, and so in every room tested there were from one to five who did nothing on this test. Whether this is a factor which should be given great weight is an open question. The one case which shows marked and uniform differences between the groups is the Geometrical Forms. In this test, the American group leads clearly, the Scandinavian group is a close second, and the Jewish groups are quite deficient. The tabulation of the combined non-language tests gives results which confirm the statement that these tests do not show clear-cut differences, taken as a group, such as are shown in the language group. Ranking

Digitized by Google

by medians, the order of achievement is: first, Russian Jews, second, Norwegians, third, Americans, fourth, Swedes, fifth, Roumanian Jews.

By way of testing the reliability of these medians, in each case a "reliability coefficient" is given which is derived according to the formula given in Thorndike's Mental and Social Measurements, Page 194, where the P. E. (probable error) of the obtained median from the true median is given as .6745 ($\frac{6}{7}$.sigma$\div\sqrt{n}$). This is to be used to indicate the probable range of the median, and so to determine the likelihood of the medians being interchanged with any addition to or increase in the number of cases. Thus, in the Language Group median for the Americans, the median 271.4 may be increased and decreased by the coefficient 3.4 to indicate the probable range, 271.4 plus 3.4 equaling 274.8, and 271.4 minus 3.4 equalling 268.0. Thus the probable range of the median is from 278.4 down to 268.0. In the same way, the probable range of the Roumanian Jewish group is 242.5 plus or minus 5.4, or a range of 247.9 down to 237.1. It will be readily seen that the chance is very remote of any interchange of median between the American and Roumanian Jewish group. On the other hand, in the Non-Language group, the American range is from 606.4 down to 588.6, and the range of the Roumanian Jewish group from 581.0 down to 549.0, and of the Russian Jewish group from 620.3 down to 594.7. Thus there is actual overlapping in the range of the American and Russian groups, and only a margin of seven points separating the Americans and Roumanians. Here the significance of the medians can not be pronounced very definite. Another way of showing the results of the tables is given in Table XXVII. Here the percentage of "overlapping" of the various groups with the American Group is shown. That is, the number and percentage of cases of each group which

Digitized by Google

do as well or better than the median American child is shown for each test.

The table is to be read in this way: Twenty Norwegian children, or 25.6% of the Norwegian children, do as well or better than the median American child in the Opposites Test. Thirty-six Swedes, or 22.6% of the Swedish children, do as well or better than the median American child in the Opposites Test. Seventeen Russian Jewish children or 20.9% of the Russian Jewish children do as well or better than the median American in the Geometrical Forms Tests. Forty-eight Norwegian children, or 61.5% of the Norwegians do as well or better than the median American child in the Number Completion Tests. While the results are the same, this method of stating them may appear more vivid than the comparison of medians.

TABLE XXVII

SHOWING NUMBER AND PERCENTAGE OF EACH OF FOUR NATIONAL GROUPS WHO DO AS WELL OR BETTER THAN THE MEDIAN AMERICAN CHILD IN THE VARIOUS OBJECTIVE TESTS

TEST	American	Norwegian		Swedish		Roumanian Jews		Russian Jews	
	Med.	No.	%	No.	%	No.	%	No.	%
Opposites.....	55.4	20	25.6	36	22.6	13	24.0	19	23.4
Trabues.....	105.3	21	26.8	44	27.6	14	25.9	21	25.9
Vocabularies.....	112.2	26	33.3	48	30.1	25	46.2	35	43.2
All Language.....	271.4	22	28.2	38	23.9	17	31.4	24	29.6
Substitutions.....	154.9	41	52.5	76	47.8	24	44.4	47	58.0
Memory Span....	161.2	25	32.0	51	32.0	28	51.8	40	49.3
No. Completion..	160.2	48	61.5	78	49.0	31	57.4	45	55.5
Geom. Forms.....	152.8	32	41.0	70	44.0	14	25.9	17	20.9
All Non-Language.	597.5	41	52.5	69	43.4	22	40.7	43	53.0

Digitized by Google

The conclusions from the objective tests are clearly that the American child of the third generation is distinctly better in all tests requiring language abilities, than the children of the foreign born, or of the second generation from the foreign born. In general, it may be as definitely said that there are no great national differences apparent in the abilities which do not require language knowledge or familiarity. The only exception to this is in the case of perception of geometrical form, in which evidently the racial trend of the Jewish people away from mechanics and mechanical ingenuity seems to be productive of a definite loss in form-perception. Further conclusions are reserved for Chapter VIII.

Digitized by Google

CHAPTER VII

THE NATIONALITY FACTOR IN RELATION TO OTHER FACTORS AS AFFECTING SCHOOL PROGRESS

Mobility of students.

a. One marked feature of public school conditions in America, and a feature especially marked in the larger cities, is the continual shifting of pupils between schools in the same city and between localities in general. This restlessness of the typical American is without doubt a definite factor in the progress, or rather lack of progress, of many children in school. The study under consideration has been worked out to show the relation of this shifting as it occurs in the various nationality groups observed, and is put in tabular form in the following pages.

Two thousand four hundred and twenty-three children in Minneapolis and St. Paul were studied in this connection, and in Table XXVIII the results for the entire group are collected. It will be seen that 521 out of the total number have attended school in other cities or towns than the one in which they now live—21.5%, or, roughly, one in every five. One thousand four hundred eighty-two have attended other schools, either in the same district or outside, than the one in which now enrolled,—61.1%, nearly two out of every three. Of course, a certain amount of this shifting within the system is not the fault of the pupil (or parent), but is due to the administration of the system—changing of school district boundaries, opening of new buildings, consolidation of districts, restricting upper grade work to only one of a group of three or more buildings, and the like. Inspection

Digitized by Google

of the actual schools in which the children have been enrolled shows that this administrative factor is not important in the situation in the schools studied, and this is further accounted for by the fact that the schools under observation are, with

TABLE XXVIII

MOBILITY OF 2,423 MINNEAPOLIS AND ST. PAUL SCHOOL CHILDREN, SHOWING NUMBER OF SCHOOLS THEY HAVE ATTENDED

Number who have attended the school only in which they are now enrolled		941
Number who have attended 2 schools both in Minneapolis (or St. Paul)	555	
3 schools, all local	253	
4 schools, all local	98	
5 schools, all local	41	
6 or more schools, all local	14	
Total		961
Number who have attended 2 schools, including the one now attended and one outside of the city	160	
2 outside of the city	41	
3 outside of the city	13	
4 outside of the city	5	
5 or more outside the city	2	
Total		221
Number who have attended one local and one outside of the city, in addition to the one in which now enrolled (3 in all)	141	
4 in all, local and outside	79	
5 in all, local and outside	37	
6 in all, local and outside	24	
7 or more local and outside	19	
Total		300
Total who have attended more than one school		1,482
Grand Total		2,423

Digitized by Google

SUMMARY OF TABLE XXVIII

Number who have attended only the school in which they are enrolled	941
Number who have attended two schools	715
three schools	435
four schools	190
five schools	83
six or more schools	59
Total	2,423
Number who have attended no schools outside of the city in which they are living	1,902
Number who have attended school in other localities besides the one in in which they are now living	521
Total	2,423

one exception, large buildings, which are not "fed" by smaller buildings. In this one case (the Jackson, Minneapolis), the pupils were considered, if coming from the Clay or Peabody schools, as having been enrolled continuously in one building only, and so are not included in the totals just quoted. It will be noted that 59 children have each attended six or more schools during their school lives. Some of these cases are notable. Twelve have a record ranging from eight to thirteen schools; all of these are retarded from six months to five years, with one exception, and this one is lowest in scholarship rank in his class. All but two are below median in scholarship, or have not been enrolled long enough in the school in question to have received a mark for the semester, and so are required to repeat the grade. The two exceptions are a girl in the eighth grade of the Sibley School of St. Paul, who had attended seven other schools in St. Paul and one outside, was fifteen years and four months old, but ranked first in her class; and a girl in the sixth A grade of the Calhoun School of Minneapolis, whose father was an itinerant photographer; she had attended two

Digitized by Google

schools in Minneapolis and ten outside, besides the Calhoun, and so was fourteen years and two months old before completing the sixth grade, altho she ranked second in her class. If these two children can remain static for the remainder of their school careers, they will undoubtedly be able to make up some time and to graduate from high school before twenty years of age, but in the case of the other ten, there is no reason to believe that the combination of retardation and poor scholarship will result otherwise than in their being forced to leave school without completing the twelve grades, and in most cases it will mean barely completing the eighth.

TABLE XXIX

SHOWING MOBILITY OF SCHOOL POPULATION, AS DISTRIBUTED BETWEEN NATIONALITY GROUPS 1 TO 12, INCLUSIVE, GIVING NUMBER OF CASES

Group Number	Nation	Total Cases	No. Att. only one School	No. Att. other locals	No. Att. other outside	No. Att. other both local & out
1	United States...	342	124	103	49	66
2	Great Britain...	153	64	53	15	21
3	Germany.....	184	76	76	15	17
4	Norway.....	220	81	87	20	32
5	Sweden.....	423	198	156	37	32
6	Austro-Hungary.....	118	71	33	10	4
7	Roumanian Jews	96	40	40	4	12
8	Russian Jews...	324	82	181	16	45
9	Poland.....	29	9	15	1	4
10	Finland.....	51	23	12	10	6
11	Denmark.....	24	8	10	2	4
12	Italy.....	18	8	8	0	2
		1,982	784	774	179	245

Digitized by Google

TABLE XXX

SHOWING MOBILITY OF SCHOOL POPULATION, AS DISTRIBUTED BETWEEN NATIONALITY GROUPS 1 TO 12, INCLUSIVE, GIVING PERCENTAGES OF EACH

Group Number	Nation	Total Cases	Percentage Who Have Attended			
			Present School Only	Other Local Schools	Other Outside Schools	Other Both Local & Outside
1	United States...	342	36.2	30.1	14.4	19.3
2	Great Britain...	153	41.8	34.6	9.8	13.8
3	Germany.....	184	41.3	41.3	8.2	9.2
4	Norway.....	220	36.8	39.6	9.1	14.5
5	Sweden.....	423	46.8	36.9	8.7	7.6
6	Austro-Hungary.....	118	60.2	28.0	8.4	3.4
7	Roumanian Jews	96	41.6	41.6	4.2	12.6
8	Russian Jews...	324	25.3	56.0	4.9	13.8
9	Poland.....	29	31.1	51.7	3.5	13.7
10	Finland.....	51	45.1	23.5	19.6	11.8
11	Denmark.....	24	33.3	41.7	8.3	16.7
12	Italy.....	18	44.4	44.4	0	11.2
			39.5	39.1	9.0	12.4

Tables XXIX and XXX show the distribution of this mobility among the nationality groups, the first giving the number of cases and the second the percentages for each group. The significant point of these tables is that the American group, which is least retarded in general, and stands highest in scholarship, also is the most mobile, in so far as movement between localities is concerned, although they are not as mobile within the system as the Russian Jews. This shows very definitely that the greater retardation and less acceleration of other groups cannot be explained on the ground that they are more mobile than those of

Digitized by Google

American ancestry. It also seems to indicate that the mobility of American children is attended with less disastrous results than in the case of other nationalities. In fact, one might work out a very plausible argument to the effect that the resourcefulness and adaptability which have come to be known as dominant traits of the typical American are developed by this very shifting of the school children.

Occupation of parents.

b. The occupation of fathers of 1720 pupils were studied, and were classified under sixty different heads. For purposes of this study, however, it seemed satisfactory to combine these under the heads used in the United States Census, namely, Agriculture and Animal Husbandry, Manufacturing and Mechanical Trades, Trade and Commerce, Transportation, Public Service, Professions, Domestic and Personal Service, Clerical.

The only important departure from this classification was the addition of Unskilled Labor as a separate division, and a corresponding subtraction from the preceding groups of those shown to be engaged in unskilled labor.

As would of course be the case in a city, the first group is very small. The types of occupation classed here are nursery and greenhouse owners and employees and, notably, a group of Roumanian Jews who are interested in cattle raising and dealing on a small scale. There are some market gardeners and some retired farmers in the list.

The influence of the draft had been felt very lightly in the families reported at the time of the inquiry, for the number reported as soldiers or sailors under the heading Public Service was but six.

Such groups as Manufacturing and Mechanical Trades, and Trade and Commerce, are not very enlightening, for they include so wide a range of occupation, with so widely

Digitized by Google

varying abilities required, that the relationship of either group to intelligence or to effect on school progress of children is not very clear. Some comments will clarify the situation somewhat. The large number of Russian Jews engaged in trade includes both small shop keepers and junk dealers, as well as an appreciable number of peddlers. The Swedes engaged in Manufacturing and Mechanical Trades are principally engaged in the building trades, 51 of the 168 being carpenters and building contractors; 41 more work at other forms of building industry; only 26 are machinists and iron workers, as contrasted with the

TABLE XXXI

SHOWING DISTRIBUTION OF FATHERS OF 1,720 PUPILS OF 12 NATIONALITIES ACCORDING TO OCCUPATIONS. ACTUAL NUMBERS SHOWN

No.	Nation	No. Cases	Ag. & An. Husb.	Mfg. & Mech.	Trade	Transportation	Public Service	Professions	Dom. & Pers.	Clerical	Common Labor
1	United States...	314	7	63	109	37	8	57	7	14	12
2	Great Britain...	130	0	45	22	27	8	11	5	5	7
3	Germany.....	164	1	70	29	13	2	10	13	13	13
4	Norway.....	183	2	83	25	27	3	14	9	3	17
5	Sweden.....	354	7	168	42	58	9	17	18	9	26
6	Austro-Hungary.....	98	0	58	4	3	3	0	7	0	23
7	Roumanian Jews	83	2	31	38	8	0	0	1	1	2
8	Russian Jews...	289	5	99	137	18	5	8	6	3	8
9	Poland.....	26	0	13	0	2	1	0	1	2	7
10	Finland.....	45	1	31	3	3	2	1	0	0	4
11	Denmark.....	21	1	9	3	2	1	0	2	0	3
12	Italian.....	13	0	0	2	0	0	3	3	0	5
	Totals.....	1,720	26	670	414	198	42	121	72	50	127

Digitized by Google

TABLE XXXII

SHOWING PERCENTAGES OF FATHERS OF 1,720 PUPILS OF 12 NATIONALITIES ENGAGED IN VARIOUS OCCUPATIONS

No.	Nation	No. Cases	Agri. & An. Hus.	Mfg. & Mechan.	Trade	Transportation	Public Service	Professions	Dom. & Pers.	Clerical	Common Labor
1	United States...	314	2.2	20.0	35.0	11.7	2.5	18.1	2.2	4.4	4.0
2	Great Britain...	130	0.0	34.6	17.0	20.0	6.1	8.4	3.8	3.8	5.3
3	Germany.....	164	0.6	42.8	17.7	7.9	1.2	6.1	7.9	7.9	7.9
4	Norway.....	183	1.2	45.3	13.6	14.8	1.6	7.7	4.9	1.6	9.3
5	Sweden.....	354	2.0	47.3	12.0	16.4	2.5	4.8	5.1	2.5	7.4
6	Austro-Hungary.	98	0.0	59.2	4.0	3.1	3.1	0.0	7.1	0.0	23.5
7	Roumanian Jews	83	2.4	37.4	45.8	9.6	0.0	0.0	1.2	1.2	2.4
8	Russian Jews...	289	1.7	34.3	47.5	6.2	1.7	2.8	2.1	1.0	2.7
9	Poland.....	26	0.0	50.0	0.0	7.7	3.8	0.0	3.8	7.7	27.0
10	Finland.....	45	2.2	68.9	6.7	6.7	4.4	2.2	0.0	0.0	8.9
11	Denmark.....	21	4.8	42.8	14.3	9.5	4.8	0.0	9.5	0.0	14.3
12	Italian.....	13	0.0	0.0	15.3	0.0	0.0	23.1	23.1	0.0	38.5
	Totals.....	1,720	1.5	39.0	24.1	11.5	2.4	7.0	4.2	2.9	7.4

Austro-Hungarian group, where 25 of 58 in this group are machinists, and 12 more are mill operatives; the Norwegians also contribute more to the building trades than to any other industry; the German group contributes the only other appreciable number to building.

Table XXXI gives the actual numbers engaged in each occupational group; Table XXXII gives the percentages of distribution of each group among the various occupations; Table XXXIII shows the proportional number each nationality contributed to the total number engaged in each occupational group. The tendency of American parents to

Digitized by Google

TABLE XXXIII

SHOWING DISTRIBUTION OF OCCUPATION AMONG VARIOUS NATIONALITIES, GIVING PERCENTAGES FOR EACH OCCUPATION

Occupation	No. Eng.	United States	Great Britain	Germany	Norway	Sweden	Austro-Hungary	Roumania	Russia	Poland	Finland	Denmark	Italy
Agriculture.....	26	27.0	0.0	3.8	7.7	27.0	0.0	7.7	19.2	0.0	3.8	3.8	0.0
Mfg. & Mech....	670	9.4	6.7	10.5	12.4	25.1	8.6	4.6	14.8	1.9	4.6	1.4	0.0
Trade.....	414	26.3	5.3	7.1	6.1	10.2	0.9	9.1	33.1	0.0	0.7	0.7	0.5
Transport.....	198	18.7	13.7	6.5	13.7	29.3	1.5	4.0	9.1	1.0	1.5	1.0	0.0
Pub. Service....	42	19.1	19.1	4.7	7.1	21.5	7.1	0.0	12.1	2.3	4.7	2.3	0.0
Professions.....	121	47.1	9.1	8.3	11.6	14.1	0.0	0.0	6.6	0.0	0.8	0.0	2.4
Dom. & Per.....	72	9.7	6.9	18.1	12.5	25.0	9.7	1.4	8.3	1.4	0.0	2.8	4.2
Clerical.....	50	28.0	10.0	26.0	6.0	18.0	0.0	2.0	6.0	4.0	0.0	0.0	0.0
Uns. Labor.....	127	9.5	5.5	10.3	13.5	20.5	18.1	1.5	6.3	5.5	3.1	2.3	3.9
	1,720												

professional and clerical occupation is shown very clearly here; the large number of the Swedish group in Transportation is explained by the inclusion of street railway employees, section laborers and teamsters and delivery men in this group.

It is rather significant that the Swedish and Norwegian population engages to so slight a degree in the professional, clerical and mercantile pursuits; there would seem to be evident a direct connection between this tendency and the comparatively slow progress of the children in school; the children of such parentage do not have the same advantages in the way of reading matter, are not stimulated to attain to a high degree of scholastic proficiency, do not appreciate the necessity of application to scholastic work; it is of course

Digitized by Google

commendable that the very necessary and vital trades of general construction and building are maintained as one of the heritages of Swedish children; but there should be no monopoly of such an occupation, so that a class feeling would grow up, by which any one nationality should control or dominate in the industry. There would certainly seem to be a strong indication that the Swedish element in the population of the Twin Cities, at least, is not grasping the opportunity to profit by education to the same extent as other newcomers, such as the Russian Jews.

Economic status of parents.

c. An element which is tangible and definite in estimating the economic condition of a community is the number of citizens in that community who own their homes. In the present inquiry data were collected from 2365 pupils of whom 1936 belong to the 12 nationality groups especially considered. Table XXXIV gives the result of the inquiry. It will be noted that the Austrians, Poles, and Finns head the list, with very definite percentages in their favor. The American and Norwegian groups, on the other hand, rank very low in the list. This disposition of the typical American to rent is quite in line with his restlessness as shown in the study of the mobility of the school population; it was therefore to be expected, and in general, the two tables show a very close relation. Viewed in the light of general social conditions in a large city, the study points some very definite tendencies. The fact of the high ownership of homes among the Austro-Hungarians is due to the large number of Slovaks owning their homes. It is the habit of these people to settle in rather humble surroundings, and to become permanent in such localities—from the view-point of the American, to stagnate. On the other hand, the well known tendency of the Russian Jew to progress in the social scale from one

Digitized by Google

environment to a better, finally invading the most exclusive residential districts as his financial accumulations permit, is not so apparent in the table, as would seem likely—but his ownership of home is to be looked on in the light of pecuniary investment for quick sale, rather than as a domicile for the remainder of his natural life. Therefore, the ownership of a home by the Russian means a very different thing from the case of the Slovak. It is more nearly an index of improving economic standards. On the other hand, the non-ownership of home by the American does not mean a correspondingly low economic status, but rather a tendency to invest money in other ways than in real estate. It is difficult to account satisfactorily for the disparity between the Norwegians and Swedes in the table. It may be simply

TABLE XXXIV

NUMBER AND PERCENTAGE OF EACH NATIONAL GROUP OWNING OR RENTING HOMES

Group No.	Nation	Total Cases	Owning Homes		Renting Homes	
			Number	%	Number	%
1	United States..	327	136	41.6	191	58.4
2	Great Britain..	151	71	47.1	80	52.9
3	Germany.....	180	97	53.9	83	46.1
4	Norway.....	213	81	38.1	132	61.9
5	Sweden.....	414	200	48.3	214	51.7
6	Austro-Hungary.....	114	79	69.3	35	30.7
7	Roumanian Jews.....	93	39	41.9	54	58.1
8	Russian Jews...	323	167	51.7	156	48.3
9	Poland.....	29	23	79.3	6	20.7
10	Finland.....	51	32	62.7	19	37.3
11	Denmark.....	24	10	41.8	14	58.2
12	Italy.....	17	6	35.3	11	64.7
	Medians.....	1,936		47.7		52.3

Digitized by Google

another difference showing that there is not the general similarity in the two nations that has commonly been assumed.

This study is not very illuminating in throwing light on the subject of probable school progress. It rather indicates that the ownership of the home in a city is not at all the reliable economic index it has generally been assumed to be, further than to show the dividing line between a tendency to thrift, and a condition of definite poverty. It does not seem to give that evidence of a home atmosphere conducive to scholastic application that is to be expected as an accompaniment of the higher economic status in life.

Home conditions.

d. Closely allied with the economic status of the family is the general condition of the home: the size of family, presence of parents, the tendency to church attendance and religious training, are factors which are of importance to the welfare of the state, and may have a bearing upon the school life of the children.

One child in every eleven of those studied has no father; for of 2397 cases reporting, the fathers of 223 were dead, or supposed to be dead! There were others who were living with the mother alone, indicating a separation from the father, but these could not be verified with enough cases to warrant a tabulation. It is quite certain that at least 10% of the children do not have the father's influence in the home; the fact that this condition, as indicated in Table XXXV, is worst in the three larger groups, of Germans, Swedes and Roumanians, in view of the varying records of these three groups in the records of scholarship and intelligence, would indicate for these three groups that there was not much relationship between the presence of the father and school progress. But the absence of the mother may be a more

Digitized by Google

serious factor, for the largest percentage of mothers dead is found among the Norwegians and Swedes. Fortunately, there are not so many homes without mothers for only *one* child out of every twenty had lost his mother; 106 being dead out of the total of 2397. Of the 85 widows who are supporting their families in whole or part, 15 are American and 20 are Swede. This is a percentage of 60% American widows who are working, as against 47% Swedes. This high percentage of Americans who have left their families destitute may be an evidence of the tendency of American families to live up their incomes, or it may be the social pressure which stresses the desire to maintain a higher standard of living than is essential in cases of other nationalities. The occupations of these widows will be found in Table XXXV.

TABLE XXXV

NUMBER OF PUPILS IN EACH NATIONALITY GROUP WITH ONE OR BOTH PARENTS DEAD

Group No.	Nation	Fathers Dead		Mothers Dead		Both Dead	Widows Working	Total Cases
		No.	%	No.	%	Number		
1	United States...	25	7.1	16	4.6	1	15	350
2	Great Britain....	17	10.3	4	2.4	0	5	165
3	Germany.....	21	11.8	7	4.0	2	6	177
4	Norway.....	20	9.3	15	6.9	2	7	215
5	Sweden.....	47	11.2	32	7.6	6	20	420
6	Austro-Hungary.	10	7.7	3	2.3	0	3	129
7	Roumanian Jews	11	11.1	4	4.4	0	1	99
8	Russian Jews....	25	7.4	11	3.2	0	4	336
9	Poland.....	1	2.6	3	7.8	0	1	38
10	Finland.....	7	15.5	1	2.2	0	4	45
11	Denmark.....	3	13.7	1	4.6	0	1	22
12	Italy.....	2	11.1	0	0.0	0	1	18

Digitized by Google

OCCUPATIONS OF 85 WIDOWS WHO ARE WORKING

Personal and Domestic Service	31
Sewing	11
Clerks	8
Factory Employees	7
Stenog. & Bookkeeping	6
Boarding or Rooming house	3
Nurse & Matron	4
Canvassers	4
Miscellaneous	7
"State Pensions"	2
	85

The study of the size of family has brought out no new facts, but is reported for its bearing on the general situation. Two thousand three hundred and fifty-two children reported on this item, and these were carefully checked to avoid duplicating pupils in the same family. Duplicates were found in 215 cases, so that actually 2137 families were studied. One thousand seven hundred and eighty-six of these belonged in the 12 nationality groups shown in Table XXXVI, and these show a family of four children to be the median number for the group. The largest family reported contains fifteen children, an English family; there are three of fourteen each, two being English and one Finnish; there are two of thirteen, one Austrian and one Russian Jew; and three of twelve each, German, Norwegian and Finn. There are nine families of eleven each, and then the number jumps to thirty of ten each. American and Danish families show a median of three children, Germany, Great Britain, Norway, Sweden and Finland, four each, Austrian, Roumanian and Russia, five each, while Poland and Italy are most productive with six each. One factor of error in this study should be noted. There was a tendency to count deceased brothers and sisters, and a tendency for

Digitized by Google

the child to count himself in giving the number of his brothers or sisters. Where possible this was corrected, but it could not be checked in all cases; the result is that the figures in the table are probably somewhat too high. It is certain that they are not too low. The small size of American

TABLE XXXVI

SHOWING DISTRIBUTION OF FAMILIES OF VARIOUS SIZES, AMONG TWELVE NATIONALITIES, INVOLVING 1786 FAMILIES

No.	Nation	No. Families	Number of Children Per Family														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	United States.	320	57	91	80	45	21	12	8	2	3	0	1	..	..	..	..
2	Great Britain.	135	10	32	25	26	11	10	8	3	4	3	0	0	0	2	1
3	Germany.....	172	17	40	28	29	20	10	11	5	5	6	0	1	..	..	..
4	Norway.....	191	14	28	38	36	23	30	9	5	4	3	0	1	..	..	..
5	Sweden.....	378	33	61	77	70	57	28	27	18	4	2	1	..	..	..	..
6	Austro-Hungary.....	109	5	11	11	12	18	16	19	5	6	3	2	0	1	..	..
7	Roumanian Jews.....	88	4	4	11	10	21	13	6	8	6	5	..	..	..	..	..
8	Russian Jews.	284	7	22	34	49	54	55	28	15	10	4	5	0	1	..	..
9	Poland.....	27	0	1	3	0	4	12	1	1	3	2	..	..	..	..	..
10	Finland.....	46	1	7	8	8	6	2	5	2	3	2	0	1	0	1	..
11	Denmark....	21	2	2	10	1	2	2	1	0	1	..	..	..	..	..	..
12	Italy.....	15	0	1	0	2	4	4	3	1	..	..	..	..	..	..	..
	Total.....	1,786	150	300	325	288	241	194	126	65	49	30	9	3	2	3	1

MEDIAN NUMBER OF CHILDREN PER FAMILY

For Entire Group..... 4
For United States & Denmark.... 3
For Germany, Great Britain, Norway, Sweden and Finland..... 4
For Austro-Hungary, Roumania, and Russia..... 5
For Poland & Italy..... 6

Digitized by Google

families is reasonably one of the causes of better school progress. In the smaller family, the children have more attention, and there is both more time for the mother to concentrate her energies on the children, and fewer objects for the concentration.

Five-sixths of the parents studied belong to some church. Three thousand one hundred and thirty-six parents were reported, exclusive of the Jews, who were not taken into account, as they are already included in the Russian Jew and Roumanian Jewish groups which have been reported thruout this study. Of the 3136 parents, 532 belonged to no church. One thousand fifty-nine are Lutherans, 456 Roman Catholics, 316 Methodists, 192 Presbyterians, 141 Baptists, 117 Protestant Episcopals, 105 Congregationalists, 73 Greek or Orthodox Russian Catholics, and the rest distributed between twelve other denominations. There are evident the expected tendencies for church preferences to follow national lines. The Lutherans are made up almost entirely of Swedes, Norwegians and Germans; the Methodists are nearly all American; the Orthodox Catholics come from the Austrian mixtures; the Baptists have more Swedish members than American, the numbers being 48 and 39 respectively; the Presbyterians, Congregationalist, and Christian Churches are all American; the Protestant Episcopal about equally divided between Americans and English; the Roman Catholics have their largest membership among the Irish, English, and Canadian group, with the Americans, Germans and Austrians contributing the next largest groups; all of the Italians and practically all of the Poles are Roman Catholics. The most significant group is the Non-member group: here, 165 of the 532 are Swedes; there were 651 Swedes studied; hence 25.4% of the Swedes are not church members. The next largest group are Americans, 84 of 559, or 15%; next came the Norwegians, with 57 out of 370,

Digitized by Google

or 15.4%; next, the Germans, with 44 out of 309, or 14.2%; then the Great Britain group, with 24 out of 252, or 9.5%. It will at once be seen that this tendency of the Swedes to break from the church is much greater than in the other nationalities, even of the Americans. The effect on the home is without doubt a very real and in the main, unfortunate factor in the life of the children. It may well be that it is a more direct cause, than at first thought may appear, in the unfavorable showing that is made in the scholarship and test tables. At any rate it is significant to point out the need for a careful study of the relationship between church or Sunday School attendance and school progress. In Table XXXVII will be found a summary of the statistics for the twelve important nationality groups.

TABLE XXXVII

DISTRIBUTION OF CHURCH MEMBERSHIP OF 2,546 PARENTS OF 12 NATIONALITIES. ACTUAL NUMBERS SHOWN

Group No.	Nation	No. Cases	Luth.	R. C.	M. E.	Pres.	Bapt.	Pr. Ep.	Cong.	Grk. Cath.	Others	None
1	United States..	559	12	62	140	70	39	39	54	0	59	84
2	Great Britain..	252	6	112	28	22	10	36	5	0	9	24
3	Germany.....	309	121	60	35	9	7	8	5	0	20	44
4	Norway.....	370	263	5	20	10	3	1	4	0	7	57
5	Sweden.....	651	372	1	32	13	48	2	11	1	6	165
6	Austro-Hungary.....	210	41	58	0	0	2	0	0	72	21	16
9	Poland.....	51	0	46	0	0	0	0	0	0	3	2
10	Finland.....	80	71	0	0	0	0	0	0	0	0	9
11	Denmark.....	33	15	0	0	3	0	0	1	0	0	14
12	Italian.....	31	0	31	0	0	0	0	0	0	0	0
		2,546	901	375	255	127	109	86	80	73	125	415

Digitized by Google

A study was made of the husbands and wives who were both church members, but belonged to different sects or denominations. But of the total number studied, only 74 cases of this sort were found, and so, on account of the small number, the tabulation is omitted from this study. Such a condition, of course, may well be a disturbing factor in the home, although not necessarily so. At any rate, there are so few cases of the sort that they may be considered negligible in this inquiry.

Digitized by Google

CHAPTER VIII

SUMMARY AND CONCLUSIONS

In Chapter V the study of retardation brought out the fact that there were differences in amount of retardation existing between various national groups. In like manner the study of acceleration demonstrated that differences existed between these national groups in respect to the number of children ahead of their normal place in the grades. In general, these two relationships were shown to have an inverse agreement, that is, the greater the acceleration, the less the retardation. The examination of the marks made by these same children in their school work again demonstrated that there were appreciable differences existing between the nationality groups. In each of these studies there were found to be certain notable facts. The American group stood at or next to the head in all of the studies. The Scandinavian group stood in a median position as compared with the entire number. The Jewish group showed less stability, the Russians in general placing midway between the Norwegians and the Swedes, but the Roumanians exhibiting wide divergences. All indications, however, pointed to the conclusion that there were definite national differences, but the unreliability of the school marks cast a doubt upon the reliability of these conclusions, even when they were based upon the quartile standing of the pupils within the same school, and not between different schools. Accordingly as a diagnostic measure, in Chapter VI is described the application of objective tests to as many of the children involved in the original investigation as could be readily reached. The result of these objective tests demon-

Digitized by Google

strated beyond doubt that the differences indicated in the tables of Chapter V persist when the pupils are subjected to tests of a uniform nature, given under uniform conditions. In fact, the results of the objective tests give more discriminating results even than shown by the comparison of school marks. One way of showing this is to compare the results of Tables XXIII (p. 57) and XXVII (p. 74). In the first the percentages of three nationality groups doing as well or better than the American groups in school marks is shown. In the other, the same comparison is made for the tests. The advantage of the tests as diagnostic measures is immediately seen, for the superiority of the American group on all language tests is brought out with startling emphasis, while the comparatively slight differences in the non-language groups is also clear cut and well defined. Thus the entire result of the tests is to corroborate the findings of Chapter V to the effect that there are real national differences.

But the question immediately arises: Are these national differences inherent? Are they results of the transplanting of the foreigner and may they be expected to disappear when he has been assimilated? Or are they a combination of both? The objective tests suggest the answer. The differences are most marked in the language tests. All presentation of school work, even in manual training and domestic science, is dependent on clear understanding of English. Therefore it is definitely certain that those pupils who comprehend most clearly and distinctly the instruction which is given, other things being equal, will progress the most rapidly, and accomplish the most, both in quantity and quality. But these school marks, which show the differences noted, were taken in the last three years of the elementary school course, when all language difficulties are assumed by many to have disappeared. In fact the great result of the tests is to indicate the probability that language difficulty has *not*

Digitized by Google

disappeared, even in pupils of the seventh and eighth grades. The Cleveland Survey Report, already quoted, says on this point, with reference to the reading tests (Measuring the Work of the Public Schools, P. 144): "The fact that the American child is not handicapped by unfamiliarity with the English Language gives him a slight advantage during the first few years. Italian pupils are seriously handicapped. The sections of the city in which these pupils live are such that factors other than mere lack of English in the homes are probably to be recognized as contributing to the low rank of these pupils." And again (P. 147): "Poles and Bohemians make slow progress during the first year, follow the average closely for the next four, and then drop below the average during the next three years. Language handicaps doubtless will explain the slow start received in the first grade. There are no available data to explain the apparent weaknesses in the upper grades."

The result of the studies herein made show how hasty is this judgment that language difficulties disappear with the "first few years." The evidence is clear to show that the language superiority of the American child places him at an advantage during his entire elementary school course, and it is fair to conclude, even into the high school. The study in Chapter IV of language persistence in the home further corroborates this finding. When the children are obliged to use the foreign language in the home circle to so great an extent as indicated in that study, it is seen that this language situation is bound to persist later than the first few years of the child's school life. When the situation continues to such an extent that the American born child himself continues the foreign language as the home language even when he is married and has a home of his own, as was shown to be the case in an appreciable number of instances, the fact of his language handicap is accentuated, and worse

Digitized by Google

yet, the handicap is perpetuated as a national heritage to the third generation, at least.

The objective tests show other differences. The geometrical forms tests bring out conclusively that there are well defined racial differences in abilities of a constructive nature. The lack of mechanical and inventive occupations among the Jews is largely explained by their lack of ability to handle such situations successfully. The skill of the Scandinavians in just such situations is accented. Aside from this test, however, no great inherent differences between the nationalities are brought out. The American holds his own in the comparison, but makes no highly marked showing of superiority, as he does in the language tests. Our general answer to the question of the future, when all of these nationalities are fused into the American stock, and really assimilated, is that the disappearance of language difficulties will carry with it the disappearance of other marked differences among the descendants of these children.

With reference to the present situation, further, the subsidiary studies afford evidence to show that certain factors, which are ordinarily considered as important, vary with the national groups, thus accentuating the finding that there are differences between these groups. Thus, the American is marked among the other nationalities for his mobility—and yet holds his position of priority in the school, despite this generally conceded handicap to effective school progress. Closely related to this are his transient home ties, shown by the large percentage of Americans who rent their homes, rather than owning them. This, again, is popularly supposed to promote retardation and poor scholarship—but the American triumphs over this supposed handicap. The American parent is most likely to be occupied in professional and clerical pursuits, involving the higher types of merchandising and manufacturing,

Digitized by Google

and this tendency to follow pursuits which require familiarity with professional and trade literature is a decided advantage to the child, even though this literature is not of a definitely educational character. For the habit of reading, even if it be simply trade and manufacturing journals and reports, implies a familiarity with the niceties of language, and a comprehension of its technical and more abstruse uses, which has its effect on the vocabulary and language tone of the home. Here again the language superiority of the American has an explanation as well as a verification.

The general study has brought out incidentally the imperative need of greater uniformity in the system employed to mark the school progress of the children. It has shown that within a school system favorably known thruout the country for its modern methods of handling school problems, very great divergences exist in the method of marking the school progress of the children. So, just as the study has pointed out a method by which the superintendent may discover different standards of marking in his school buildings, it also demonstrates how he may, by the use of objective tests, determine whether such differences as are apparent are justified by the abilities of the children in these schools. An illustration of this is shown in the result of evaluating the results of the objective tests in Schools 1, 8, and 9, which are respectively the highest, the next to the lowest, and the lowest in the medians reported in Table XVIII, p. 50, for the relative school marks given in these schools. The results of the tests in these schools, raw scores reported, is as follows: Averages of all groups—

School	Opp.	Trab.	Vocab.	Subst.	Mem. Sp.	No. Comp.	Geom. Forms
1	49.7	12.6	56.9	74.9	15.2	12.3	7.1
8	57.3	13.3	58.1	79.9	16.1	12.5	8.2
9	45.9	11.5	54.4	71.0	16.4	10.1	5.5

Digitized by Google

This comparison shows conclusively that there is no justification for School No. 1 adopting a higher scale of grading its pupils than is used in School No. 8, which actually surpasses it in every test. There is more justification for the low marking median shown in School No. 9, but not enough difference to justify the great divergence of the school from the school median shown in Table XVIII. Accordingly the objective test proves its utility once more as a supervisory instrument.

General Conclusions:

While the investigation has developed primarily into the consideration of an administrative problem for the school superintendent, yet there are also pertinent conclusions for the general reader, and most significant indications of necessary procedure for the citizen who is really concerned about the problems of Americanization and naturalization—problems vitally involved with the future of our commonwealth.

To the general reader, the conclusion is to be stressed that there is no justification either to despise the attainments of the foreign born and his offspring, or to sublimate his achievement unduly at the expense of the native American. In general, there are no such marked differences in native attainment, as to justify the sort of sweeping assertions cited in the early part of this study. On the other hand, the handicap which does exist, one of language difficulty, is one that is very real, and is not to be dismissed with a laugh and an assumption that this difficulty carries with it native incapacity. The real position to be taken is that this handicap is a formidable obstacle to proper progress of the foreigner not only in school, but in all walks of life, and that it is the concern of every American to see that all possible steps are taken to remove the difficulty.

Digitized by Google

To the school superintendent, this conclusion assumes particular force. This study has pointed the way for him to evaluate his school system in terms of nationality. It has shown him the need for looking below the surface and endeavoring to discover the hidden facts which make for better school work and school progress, or for the reverse. The suggestion is evident that there must be a greater flexibility of the school curriculum and methods, to meet such situations as have been disclosed. Where great numbers of children are handicapped by stubbornly persisting difficulties of language, this difficulty must be fought and reduced, if it can not be eliminated. This can not be done by ordinary school-room procedure. A splendid illustration of this is brought out by the result of the vocabulary tests in the case of the Jewish children. In Table XXVI it will be noted that the Jewish groups did much better in this test than did the Scandinavian groups. This test involved a familiarity with the vocabulary of the school, and especially of the school histories. But on the other hand, when the results of the Trabue and Opposite tests were studied, the Jewish children did no better than the Scandinavians. These two tests require not a knowledge of "school-room English," but a practical application of the vocabulary and expression of daily life. It is a fair conclusion that the Jewish groups under observation have more diligently applied themselves to the acquisition of the English of the school room, but that this knowledge has not really benefited them in any marked degree when it comes to the application of the language facility to the expression of every day life. For such foreign born groups, then, the lesson for the superintendent is that he must add to the usual class-room procedure in language, special drill in expression, oral and written, more definite study of ordinary conversation, practice in using words in accordance with the niceties and delicate

Digitized by Google

shades of expression and meaning, with a definite goal of making this knowledge a part of the pupil's every day life and practice, rather than a purely school-room exercise. Further, it means a flexibility of the course offered to these children, by which the Scandinavian will be given especial opportunity to develop his undoubted gift for form, for mechanical skill and for working into occupational industry by the most efficient and practical roads. His Jewish compatriot must be given a different sort of training to make him more useful as a citizen in the mercantile and commercial pursuits for which his ancestry has pointed him, with a widening of the field in which he may work to advantage—the live-stock and agricultural fields being two in which he could well put his talents of organization into play. The superintendent can not overlook the part which the objective tests can and must play in this whole process. In this study, the test has shown itself the vital factor in the investigation. Where the study of the school marks was found to be faulty, both on account of the unreliability as between schools and the lack of discrimination between pupils, and on account of the small numbers of cases which resulted from a study of over 2500 pupils, a final number in each national group so small that the conclusion was forced that by that method alone, some twenty or thirty thousand cases would have to be studied in order to draw entirely scientific and satisfactory conclusions; in this difficulty, the objective test clarified and exposed the true situation and pointed the underlying causes as no purely observation study could ever do. Further, it indicated its value, incidentally, in answering clearly and positively the question as to the justification for principals to assume very high or very low standards of marking in their buildings. The injustice to the pupils of such resultant variations between schools is unmasked with startling definition.

Digitized by Google

Accordingly the superintendent is failing in his responsibility to the foreign constituents of his community if he does not seek to discover and apply such means as will most effectively serve their peculiar needs and requirements. And this is to be done, not by snap judgment and by personal opinion and impression, but by the application of scientific and objective methods.

But the lesson must not stop with the school. There is food for thought here for the leaders of these peoples who are seeking to become good Americans. Those men who are the acknowledged guides of the Swedish people, of the Jewish people, of the Italian people, in this country must come to recognize the handicaps under which their people are working, and must come to feel that real Americans are not Swedes, or Jews, or Yankees, or Italians, but are men and women with common ideals and aspirations, and that these ideals are to be interpreted in one language and one method of expression. In the new home—for the old figure of the "asylum" must be forgotten, and the new figure of the "home" must replace it—in the new home, then, there must be that facility of intercourse which is characteristic of the home, of the true home in which father, mother and children are in harmony, each understanding the other and contributing to the common cause. The encouragement of the foreign language in the newspaper, the pulpit, or the home, is directly subversive of this home spirit; and worse yet, it is definitely antagonistic to the interests of these peoples in their desire to compete with the native born of native ancestry in the struggle for maintenance.

But further, the responsibility rests on the leaders of the work in Americanism in the legislative halls and in the judicial positions of our country. Our social workers have inaugurated a work which hits at the heart of the difficulty, in working, through continuation schools and community centers,

Digitized by Google

for classes of mothers to study the English language and the civic and social responsibilities of the American mother. This will go far to solve the difficulty; but the real test comes when the laws of this country relating to citizenship are applied. If the prospective citizen is really in earnest in becoming naturalized, if he really desires to abjure allegiance to the country of his birth, and to cast his lot and his fortunes as well as those of his children, with the new country as the country of his first choice, he must be able to show this desire by objective facts. If he still clings to the language of his birth as his chosen medium, if he is not willing to adopt the language as well as the freedom of conduct and the equality of opportunity of the new home, he is not at heart ready for citizenship. If, on the other hand, he and his wife are trying, laboriously and slowly, perhaps, but surely, to use the new language in their home life and home circle, if they are reading English newspapers, if they are attending church services conducted in English, then it may be fairly assumed that they are in truth on the road to becoming Americans. Their children will not rest under a weight of almost insupportable burden in their attempt to achieve their rightful place in the life to which they are introduced. In the light of the facts herein revealed, even if there were no other compelling and vital issues of Americanization resting on the decisions of our legislators in the immediate future, the need for careful revision of the naturalization laws and practice would seem to be imperative.

Digitized by Google

IX. BIBLIOGRAPHY

This list covers books referred to or consulted in the course of the inquiry.

Studies Referring to Nationality in the Schools

AYRES, LEONARD P. 1909. *Laggards in our Schools.* Russell Sage Foundation Publications.

AYRES, L. P. AND JUDD, C. H. 1916. A Survey of the Cleveland Schools. Volume entitled "*Measuring the Work of the Public Schools.*" Cleveland Foundation, Survey Committee.

CHADWICK, R. D. 1918. *Know Your School.* Journal of Education, Boston, Oct. 31, 1918.

VAN DENBURG, J. K. 1911. *Causes of Elimination of Students in the New York Public Secondary Schools of New York City.* Teachers College, Columbia University, Contributions to Education, No. 47.

UNITED STATES CENSUS REPORTS OF 1910

References to Problems of Race and Nationality

DOMINIAN, LEON. 1917. *Frontiers of Language and Nationality in Europe.* Henry Holt and Co., N. Y.

BABINGTON, W. D. 1895. *Fallacies of Race Theories as Applied to National Characteristics.* Longmans, Green & Co. London.

PESCHEL, OSCAR. 1892. *The Races of Man.* Appleton & Co., N. Y.

TYLOR, E. B. 1889. *Anthropology.* Appleton & Co., N. Y.

ZANGWILL, ISRAEL. 1917. *The Principle of Nationalities.* Macmillan, N. Y.

THOMSON, J. A. 1910. *Heredity.* G. P. Putnam's Sons, N. Y.

References to Retardation and Acceleration

AYRES, L. P. 1909. *Laggards in our Schools.*

BACHMAN, FRANK P. 1915. *Problems in Elementary School Administration.* World Book Co., Yonkers, N. Y.

STRAYER, GEO. D. 1911. *Age-Grade Census of Schools and Colleges.* U. S. Bureau of Education, Bulletin No. 5, 1911.

BAILIFF, MATHILDA V. 1917. *An Educational Diagnosis of a Group of Seventh Grade Minneapolis Public School Children.* Unpublished. Thesis filed in University of Minnesota Library.

References to Tests, Scales and Measurements

THORNDIKE, E. L. 1913. *Mental and Social Measurements.* Teachers' College, Columbia University, N. Y.

RUGG, H. O. 1917. *Statistical Methods Applied to Education.* Houghton, Mifflin Co., N. Y.

Digitized by Google

TRABUE, M. R. 1916. *Completion-Test Language Scales.* Teachers College, Columbia University, Contributions to Education, No. 77.

CARUFEL, MARY. 1918. *A Number Completion Test.* Unpublished. Thesis filed in the University of Minnesota Library.

SISTER JEANNE-MARIE. 1919. *A Vocabulary Test.* Unpublished. Thesis filed in the University of Minnesota Library.

ADDITIONAL TABLES

The need for conserving paper and space has led to the omission of many interesting tables of distribution. These are on file in the library of the Graduate School of the University of Minnesota, as well as in the Department of Education of Dartmouth College, and may be consulted in either place.

Digitized by Google

Digitized by Google

Digitized by Google

RETURN TO ➡ **CIRCULATION DEPARTMENT**
202 Main Library

LOAN PERIOD 1 **HOME USE**	2	3
4	5	6

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS

1-month loans may be renewed by calling 642-3405
1-year loans may be recharged by bringing the books to the Circulation Desk
Renewals and recharges may be made 4 days prior to due date

DUE AS STAMPED BELOW

MAR 25 1985

REC CIR FEB 25 1985

UNIVERSITY OF CALIFORNIA, BERKELEY
FORM NO. DD6, 60m, 1/83 BERKELEY, CA 94720

YC 04599

GENERAL LIBRARY - U.C. BERKELEY

B000793936

LC3733
S2 J6
453110

UNIVERSITY OF CALIFORNIA LIBRARY

Digitized by Google

Digitized by Google